

# Mapelastic CI

Professional, Roller-Applied, Crack-Isolation  
Membrane



## DESCRIPTION

*Mapelastic® CI* is a premixed, liquid-rubber, quick-drying crack-isolation membrane for installation under ceramic tile or stone in residential and commercial interior and exterior environments. *Mapelastic CI* meets ANSI A118.12 requirements and prevents nonstructural, in-plane floor cracks up to 1/8" (3 mm) from transferring through grout, ceramic tile and stone. Once it has dried after about 30 to 50 minutes, *Mapelastic CI* is ready to receive most MAPEI polymer-modified or epoxy mortars.

## FEATURES AND BENEFITS

- Quick-drying: Allows tile/stone installation after 30 to 50 minutes
- Easily applied with roller or brush
- Convenient and versatile: Bonds to a wide range of floor surfaces
- No odor: Great for confined spaces
- Prevents in-plane floor cracks from transmitting through tile or stone

## INDUSTRY STANDARDS AND APPROVALS

- ANSI: Meets A118.12 (Crack-Isolation Membranes for Thin-Set Ceramic Tile)
- ASTM: C627 (Robinson): "Extra Heavy" service rating

## WHERE TO USE

- Residential and commercial interior and exterior floors
- In-plane crack isolation up to 1/8" (3 mm) over nonstructural cracks

## LIMITATIONS

- Do not use over structural cracks, in-plane cracks wider than 1/8" (3 mm) or where vertical out-of-plane movement occurs.
- Do not use over dimensionally unstable substrates such as hardwood flooring, oriented strand board (OSB), substrates containing asbestos, or metal. See the "Suitable Substrates" section below.
- Do not use over plank flooring, treated plywood, Lauan, vinyl, glazed tile, laminate, fiberglass or epoxy floors.
- Do not use where excessive substrate moisture and/or negative hydrostatic pressure exists. The maximum allowable moisture is 8 lbs. per 1,000 sq. ft. (3.63 kg per 92.9 m<sup>2</sup>) per 24 hours per ASTM F1869 or up to 85% relative humidity as measured with moisture probes.
- Do not use with premixed setting materials.
- Do not allow direct contact with solvent-based materials.
- Do not use in extreme freeze/thaw conditions.
- Do not apply when the substrate temperature is at or below the dew point.

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

## SUITABLE SUBSTRATES

- Concrete (cured for at least 28 days)
- Cured cement mortar beds or leveling coats
- Cement backer units (CBUs) – see the manufacturer's installation guidelines
- Radiant-heated substrates (interior only)
- Unglazed ceramic tile, cement terrazzo floors, and gypsum underlayments (interior only and greater than 2,500 psi [17.2 MPa])

Note: Existing unglazed ceramic tile must be abraded, and existing cement terrazzo must be mechanically profiled. Both substrates must be skimcoated with an appropriate MAPEI latex- or polymer-modified mortar.

- Exterior-grade plywood (for interior residential floors and countertops in dry conditions only)

## SURFACE PREPARATION

- All substrates must be structurally sound, stable, clean and free of any substance or condition that may reduce or prevent proper adhesion.
- See the "Surface preparation requirements" reference guide in the Tile & Stone Installation Systems section of MAPEI's Website.
- Do not use chemicals (acid etching or stripping) to prepare approved substrates.

- Concrete substrates should have an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #2. Mechanically clean and profile by diamond-cup grinding or another engineer-approved method when necessary.
- Substrate and ambient temperatures must be between 45°F and 95°F (7°C and 35°C) during and at least 24 hours after application.
- Fill all cracks and gaps that are greater than 1/32" (1 mm) with an appropriate filler material. Force the material into cracks, finish it smooth with a trowel and let it dry.

## MIXING

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

- Product is ready to use. Stir it by hand before application.
- Do not dilute with any other material.

## PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Apply *Mapelastic CI* at a wet film thickness of 20 mils (about the thickness of a credit card). Apply it to the entire area using a 3/8" (10 mm) nap roller. Let it dry to a dark brown color. The final dry film thickness should be at least 15 mils (about the thickness of a business card).
2. Inspect the installation and, if any areas are not properly covered, apply a second coat perpendicular to the first coat. Let it dry.
3. Promptly use water to wash tools after product use.

## EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints as specified per TCNA Method EJ171 or per TTMAC Specification Guide 09 30 00, Detail 301MJ. Do not cover expansion joints with mortar.
- Protect tilework with metal strips (edge metal) along both edges of structural building expansion joints.

## CLEANUP

- Remove any excess *Mapelastic CI* (while fresh) with a damp sponge, soap and warm water. Any completely dried material may be mechanically removed.

## PROTECTION

- Protect the installation from foot traffic, rain and freezing for 24 hours.
- Protect the installed *Mapelastic CI* from contamination, excessive heat and extended sun exposure until the final flooring is installed.

## INSTALLING TILE OR NATURAL STONE

- *Mapelastic CI* is ready to receive tile/stone mortars when it is dry to touch (about 30 minutes after application) or has turned a dark brown color.
- Large-and-heavy-tile mortars (for large tile or stone) and screeds (for leveling floors) may require extended setting times when set over *Mapelastic CI*.

- Use a MAPEI polymer-modified mortar classified as ISO 13007 C2 and meeting ANSI A118.4 and ANSI A118.11, or an epoxy mortar classified as ISO 13007 R1 or R2 and meeting ANSI A118.3.

### Product Performance Properties

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

| Elongation – ASTM D412                                   | > 400%                        |
|----------------------------------------------------------|-------------------------------|
| Tensile strength – ASTM D412                             | > 350 psi (2.41 MPa)          |
| Flash point (Seta flash)                                 | Nonflammable                  |
| Freeze/thaw stability                                    | Up to 5 cycles at 0°F (-18°C) |
| VOC content (SCAQMD Rule 1113)                           | < 100 g per L                 |
| Typical VOC content per SCAQMD Rule 1113 testing methods | 0 g per L                     |

### Final Performance Per ANSI A118.12 – Crack-Isolation Membranes for Thin-Set Ceramic Tile

| 4.1, Fungus and microorganism resistance         | Complies |
|--------------------------------------------------|----------|
| 5.1.3, Shear strength at 7 days                  | Exceeds  |
| 5.1.4, Water immersion shear strength at 7 days  | Exceeds  |
| 5.1.5, Shear strength at 4 weeks                 | Exceeds  |
| 5.1.6, Shear strength after accelerated aging    | Exceeds  |
| 5.2.3, Point load resistance after 28 days' cure | Exceeds  |
| Seam strength                                    | Exceeds  |
| Breaking strength                                | Exceeds  |
| Dimensional stability                            | Exceeds  |

### Shelf Life and Product Characteristics

| Shelf life | 2 years when stored in original unopened container at 73°F (23°C) |
|------------|-------------------------------------------------------------------|
| Color      | Purple when wet; dark brown when dry                              |
| Storage    | Store in cool, dry place. Protect from freezing.                  |

## Application Properties

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

| Drying time (before installing ceramic tile or stone) | About 30 to 50 minutes (1 coat) |
|-------------------------------------------------------|---------------------------------|
| Final dry film thickness                              | At least 15 mils                |

## Packaging

| Size                          |
|-------------------------------|
| Pail: 1 U.S. gal. (3.79 L)    |
| Pail: 3.5 U.S. gals. (13.2 L) |

**Approximate Coverage\*** at a dry film thickness of 15 mils

| Product Amount          | Coverage                           |
|-------------------------|------------------------------------|
| 1 U.S. gal. (3.79 L)    | 71 sq. ft. (6.60 m <sup>2</sup> )  |
| 3.5 U.S. gals. (13.2 L) | 250 sq. ft. (23.2 m <sup>2</sup> ) |

*\* Coverage shown is for estimating only. Actual jobsite coverage may vary according to substrate conditions, concrete profile and porosity, type of equipment used, thickness applied, handling and application procedures.*

## RELATED DOCUMENTS

- Reference guide: "Surface preparation requirements" for tile and stone installation systems\*\*

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

## ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (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-durabilite@mapei.com](mailto:sustainability-durabilite@mapei.com).

## WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. Please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

### 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](http://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-BACKED<sup>SM</sup> warranty information,  
visit [www.mapei.com](http://www.mapei.com).

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