

Mapelastic™

AquaDefense

Premium waterproofing and crack-isolation membrane



INSTALLATION GUIDE IGT0109

LIMITATIONS

- Not for use over in-plane cracks where > 1/8" (3 mm) or vertical out-of-plane movement occurs.
- Do not use over substrates containing asbestos, dimensionally unstable substrates such as hardwood flooring, particleboard, oriented strand board (OSB), Masonite or metal. (See suitable substrates below.)
- Do not use where excessive substrate moisture and/or where negative hydrostatic pressure exists. Maximum allowable moisture is 5 lbs. per 1,000 sq. ft. (2,27 kg per 92,9 m²) per 24 hours per ASTM F1869 or up to 75% relative humidity as measured with moisture probes.
- Do not use as a single-application roof-deck membrane, wear surface or primary waterproofing membrane on balconies or decks directly over occupied space or in storage tanks.
- In steam rooms, a vapor barrier is required in conjunction with *Mapelastic AquaDefense*.
- Do not allow direct contact with solvent-based materials.

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

SUITABLE SUBSTRATES

Interior and exterior

- Fully cured concrete at least 28 days old (see "Limitations")
- Masonry walls of cement block or brick
- Cured cement mortar beds or leveling coats (at least 3 days old)
- Cement backer units (CBUs)

Interior only

- Gypsum wallboard (walls/ceilings only, in approved application areas only)
- Properly prepared radiant-heated substrates
- Properly prepared unglazed ceramic tile and cement terrazzo floors
Note: Existing unglazed ceramic tile must be abraded and existing cement terrazzo must be mechanically profiled. Both must be skimcoated with an appropriate MAPEI latex or polymer modified mortar.
- Exterior-grade plywood (for interior residential floors and counter-tops, in dry areas only)

1. Substrate Preparation

Before beginning, consult the "Surface Preparation Requirements" document for tile and stone installation systems at www.mapei.com.

- All recommended substrates must be structurally sound, stable, clean and free of any substance preventing adhesion.
- Do not use chemicals (acid etching or stripping) to prepare approved substrates.
- Concrete substrates should have a Concrete Surface Profile #2 per ICRI (International Concrete Repair Institute). Mechanically clean and profile by diamond-cup grinding or other engineer-approved method when necessary.

- Substrate and room temperatures must be 45°F to 95°F (7°C to 35°C) during and at least 24 hours after application.

2. Mixing

- Choose suitable safety equipment before mixing and use.
- Stir before using.
- See the Material Safety Data Sheet (MSDS) for *Mapelastic AquaDefense* at www.mapei.com for additional information.

3. Application

- Fill all cracks, control joints and gaps in corners and coves that are greater than 1/32" (1 mm) with an appropriate filler material. Force material into crack and finish smooth with trowel. Let dry.
- An optional reinforcing fabric may be used with *Mapelastic AquaDefense* in any of the following areas. (See the section "Optional Use of MAPEI's *Reinforcing Fabric*".)

Pretreat cracks, control joints, corners and coves (floor/wall intersections):

1. Apply *Mapelastic AquaDefense* liquid 6" (15 cm) on both sides of the cracks, control joints, corners and coves, using a paintbrush. Let dry to a dark green color.
2. Apply 2nd coat and let dry.

Pretreat drains:

1. Review drain manufacturer's instructions for waterproof membrane installation in conjunction with these instructions.
2. Fill space between drain pipe and substrate with appropriate expansion joint materials (typically foam backer rod and sealant).
3. For drains with bolt-down collar and weep holes, loosen bolts and remove from flange. Abrade drain flange with sandpaper and clean and dry thoroughly.
4. With paintbrush, apply a liberal coat over and around drain flange. Let dry to a dark green color.
5. Apply 2nd coat and let dry.
6. For sealant, apply bead of silicone or urethane sealant around drain flange at drain throat to join *Mapelastic AquaDefense* to the drain assembly. Leave no voids.
7. Bolt down collar to drain flange.

Pretreat openings around pipes and other penetrations:

1. Pack/fill the openings/spaces between drain pipe and substrate with appropriate expansion joint materials (typically foam backer rod and sealant).
2. Apply *Mapelastic AquaDefense* with brush around and up onto floor or wall penetration. Let dry (will turn dark green).
3. Apply 2nd coat and let dry.
4. Where *Mapelastic AquaDefense* coating ends on any penetration, apply a bead of silicone or urethane sealant.

Completing the main area:

1. Apply 1st coat of *Mapelastic AquaDefense* (including previously coated areas) using a 3/8" (10 mm) nap roller. Let dry to a dark green color.

2. Apply 2nd coat and let dry.
3. Final dry thickness of first and second coats should be 20 to 30 mils (about the thickness of a credit card).
4. Inspect and, as needed, recoat pinholes or areas not completely covered. Let dry.

4. Cleaning

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

5. Protection

- Protect from foot traffic, rain and freezing for 24 hours.
- Protect installed *Mapelastc AquaDefense* from contamination, excessive heat and extended sun exposure until tile or stone is installed.

6. Flood Testing (per ASTM D5957-98 [2005])

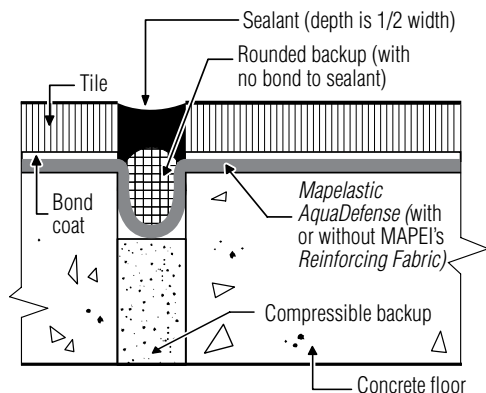
- If flood testing is required, allow *Mapelastc AquaDefense* to cure at least 12 hours at 73°F (23°C) and 50% relative humidity. Actual curing time depends on air and substrate temperature, substrate porosity and humidity. Expect shorter drying times in warmer conditions, longer drying times in cooler conditions.

7. Installing Tile or Stone

- *Mapelastc AquaDefense* is ready to receive thin-set tile or stone when dry to touch (after about 30 to 50 minutes). When installing medium-bed mortars (for large tile or stone), screeds (for leveling floors), or epoxy adhesives, let *Mapelastc AquaDefense* cure for at least 8 hours.
- For tile and stone installations, use MAPEI polymer-modified or epoxy mortars.

8. Expansion and Control Joints

- Provide where specified per the drawing shown below, with an appropriate joint sealant to satisfy the project's requirements.



9. Optional Use of MAPEI's Reinforcing Fabric (available sizes):

- 6" x 75' (15 cm x 22,9 m) Roll (Product No. 0170004) – To reinforce over cracks, control joints, corners, coves and floor or wall penetrations
- 38" x 75' (97 cm x 22,9 m) Roll (Product No. 0170007) – To reinforce around drains or main area to be waterproofed

Select fabric size (see above)

- For coves (floor/wall intersections), allow 2" (5 cm) of fabric on the floor and 4" (10 cm) of fabric up the wall. For cracks, control joints and vertical corners, allow 3" (7,5 cm) of fabric on each side.
- For drains, cut desired fabric size from 38" (97 cm) roll. For floor or wall penetrations, use 6" wide, 38" wide or a combination of both.
- For large areas, the 38" (97 cm) roll is recommended.

Cut fabric to size

- Cut all required pieces. Set aside.

Pretreat cracks, control joints, corners, coves, drains, and floor and wall penetrations

1. Apply *Mapelastc AquaDefense* as described in the "Pretreat" sections above.
2. Lay pre-cut pieces of fabric into wet *Mapelastc AquaDefense*. Use brush to press fabric into corners until liquid comes through fabric. Work out any wrinkles or bubbles.
3. While fabric is wet, apply additional *Mapelastc AquaDefense* over fabric until completely covered to create void-free surface. Let dry to a dark green color.

Install fabric on main floor

1. Apply 1st coat of *Mapelastc AquaDefense* (including areas previously coated) using a 3/8" (10 mm) nap roller.
2. Place fabric into wet liquid on floor. Using a roller, apply pressure to fabric, working out wrinkles or bubbles while forcing *Mapelastc AquaDefense* to come through fabric. Overlap seams and ends of fabric 2" (5 cm). While still wet, apply additional *Mapelastc AquaDefense* over fabric until completely covered, creating a void-free surface. Let dry completely to a dark green color.
3. Apply 2nd coat of *Mapelastc AquaDefense* to entire area. Let dry.
4. Give a final inspection, looking for pinholes, areas not completely covered or other defects. Recoat as needed. Let dry.

Installing tile or stone

- Install tile or stone per instructions above.

