# MAPELASTIC AQUADEFENSE

**Ready-to-use, ultra quick-drying, flexible liquid membrane for waterproofing interior and exterior surfaces**

CE EN 14891 · EN 14891 DMO1 MAPEI LIQUID-APPLIED WATER IMPERMEABLE PRODUCTS · 0474 · $CO_2e$ FULLY OFFSET in the entire life cycle · Fast Track Ready

## BENEFITS AND FEATURES

- Ready to use
- Dries quickly
- Perfect bond to any substrate
- Highly elastic
- Easy to apply
- Product certified according to EN 14891, waterproofing under tile

## $CO_2e$ FULLY OFFSET PRODUCTS

Residual Greenhouse Gas emissions measured throughout the life cycle of this product using Life Cycle Assessment (LCA) methodology, verified and certified with EPDs, have been offset for the year 2026 through the acquisition of carbon credits in support of forestry protection projects. For more details on emission calculations and offsetting projects, visit mapei.com.

## WHERE TO USE

Waterproofing before applying ceramic, stone, and mosaic coverings in:

- bathrooms and shower cubicles;
- laundry rooms;
- saunas and damp environments in general;
- balconies and terraces.

**Mapelastic AquaDefense** can be applied on:

- concrete;
- cementitious screeds and screeds made using special binders (**Topcem**, **Topcem Pronto**, **Mapecem**, **or Mapecem Pronto**);

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- plasterboard (for application in interior only);
- old ceramic tiles, terrazzo, and stone material;
- cementitious render.

## TECHNICAL CHARACTERISTICS

**Mapelastic AquaDefense** is a totally solvent-free, ready-to-use, ultra-quick drying, one-component light blue, synthetic resin-based paste in water dispersion.

**Mapelastic AquaDefense** is easy to apply using a long-haired roller, brush, or trowel on horizontal, sloping, and vertical surfaces. **Mapelastic AquaDefense** dries very quickly to form a flexible membrane without a sticky surface. It is resistant to light pedestrian traffic after just 3 hours and forms an excellent grip with all types of adhesive for laying ceramic, stone material, and mosaic of all kinds. The flexible nature of **Mapelastic AquaDefense** helps it withstand normal movements caused by expansion and shrinkage of the substrate due to temperature variations and vibration.

Tiles laid on floors waterproofed with **Mapelastic AquaDefense** by using C2F-class MAPEI adhesives (such as **Keraquick Maxi S1**, **Ultralite S1 Flex Quick**, etc.) and grouted with **Ultracolor Plus** can be opened to pedestrian traffic within 12 hours of starting the work.

**Mapelastic AquaDefense** is resistant to water, lime water (pH >12), and detergents commonly used for cleaning residential environments.

## RECOMMENDATIONS

- Do not apply **Mapelastic AquaDefense** if the temperature is lower than +5°C.
- **Mapelastic AquaDefense** must always be covered with ceramic, mosaic or stone.
- Do not apply **Mapelastic AquaDefense** on cementitious substrates with residual humidity higher than 3% or subject to recurring rising damp.
- Do not apply **Mapelastic AquaDefense** on crumbly cementitious substrates, old floors that are not well bonded to the substrate or surface treatments which could affect the bond.
- Do not use **Mapelastic AquaDefense** to cover cracks.
- Protect the surface from rain for at least 1 hour after applying the first coat and 3 hours after applying the second coat (times refer to +23°C and 50% relative air humidity when the product is applied on dried screeds with residual moisture lower than 3%).

## APPLICATION PROCEDURE

### Preparation of the substrate

Substrates must be well-cured, sound, clean, dry, and free of oil, grease, cement laitance, old paint, and any other substance which could affect the bond. Cementitious substrates must be stable and dry, with no rising damp. Surface dust must be suitably removed.

Smooth or level the surface with **Planitop Fast 330**.

On old ceramic floors with hollowed or empty tile joints, or whenever slopes on surfaces need to be restored before the application of **Mapelastic AquaDefense**, it is recommended to smooth or level the surface using **Planitop Fast 330**. Such substrates must be thoroughly checked and all coatings, such as wax, water-repellent treatments, etc. must be removed from the surface with a suitable cleaning product (such as **UltraCare HD Cleaner**) and/or by abrasion.

Before applying **Mapelastic AquaDefense**, pay particular attention to expansion joints and fillet joints between horizontal and vertical surfaces: in those areas apply **Mapeband** (or as alternatives **Mapeband PE 120**) together with the relevant special pieces, bonded using **Mapelastic AquaDefense**.

To waterproof drains on terraces and balconies, use the special kits from the **Drain** range. Structural joints must be waterproofed with **Mapeband TPE** bonded to the substrate with **Adesilex PG4**.

**Eco Prim Grip Plus** can be used to further improve the bond of **Mapelastic AquaDefense** on old ceramic or natural stone floors.

Highly absorbent or chalky substrates must be pre-treated with **Primer G** (generally diluted in a ratio of 1:1 or 1:2 with water to allow good penetration). Wait until the **Primer G** film is completely dry.

## Application of the product

**Mapelastic AquaDefense** must be applied in two thin (approx. 0.4 mm per coat), even coats with a long piled roller, brush or trowel. Wait until the first coat is dry, making sure the product becomes darker with a matt finish, before applying the second coat perpendicular to the first one (approximately 1 hour at +23°C and 50% relative air humidity and with substrates having residual humidity lower than 3%).

The two coats of **Mapelastic AquaDefense** must create a robust, flexible, and continuous film. Make sure there are no interruptions in the film caused by imperfections in the substrate.

If **Mapelastic AquaDefens**e is applied to form an anti-fracture membrane on cracked substrates, we recommend embedding the reinforcement fabric **Mapetex 50** into the first coat while it is still fresh.

**Mapetex 50** must be pressed down with a spiked roller on the first coat of **Mapelastic AquaDefense** while it is still fresh.

Wait until the first coat is dry, then apply the second coat in order to completely embed **Mapetex 50**.

Drying times may increase as **Mapetex 50** insertion increases the final thickness of the applied film.

Ceramic, stone, and mosaic tiles can be laid 4 hours after the application of the second coat (at +23°C and 50% relative air humidity) MAPEI adhesive to be selected depending on the final use of the flooring or wall and the tile type and format.
In exterior applications on balconies and terraces, use a Mapei adhesive with minimum class C2S1 according to EN 12004 standard such as **Keraflex Maxi S1**, **Keraflex Extra S1**, or **Ultralite S1 Flex**.
In interiors, use a Mapei adhesive with minimum class C2 according to EN 12004 standard, such as **Adesilex P9**, or **Keraflex**.
For the rapid installation of tiles, use an adhesive with minimum class C2F such as **Keraquick Maxi S1** or **Ultralite S1 Flex Quick**.
For mosaic tiles of all types, use **Ultralite S1 Flex** white or **Adesilex P10** + **Isolastic** diluted with 50% of water.

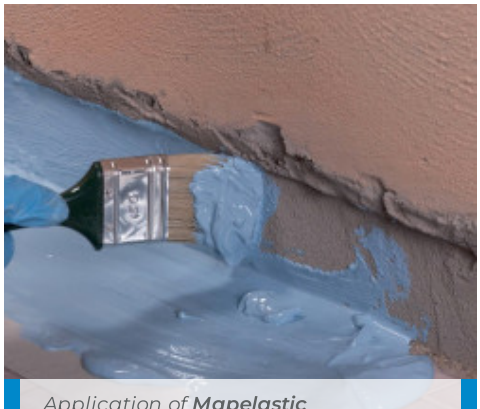
Grout tile joints with a special cementitious grout (such as **Ultracolor Plus** - class CG2WFA, **Keracolor FF**, **Keracolor GG** mixed with **Fugolastic**) or epoxy grout (for example **Kerapoxy**, **Kerapoxy Easy Design,** or **Kerapoxy CQ** - class RG). Seal expansion joints with a special MAPEI sealant (such as **Mapesil AC**, **Mapesil LM,** or **Mapeflex PU 45 FT**, according to requirements).

*Impregnating **Drain Vertical** fabric with **Mapelastic AquaDefense***

*Application of **Mapeband** on a wall-floor fillet joint with **Mapelastic AquaDefense***

*Application of the first coat of **Mapelastic AquaDefense** on a screed*

*Application by roller of the second coat of **Mapelastic AquaDefense***



*Application of **Mapelastic AquaDefense** by brush between floor and wall before applying **Mapeband***

*Bonding tiles on **Mapelastic AquaDefense***

## CLEANING

**Mapelastic AquaDefense** can be removed easily from tools and surfaces while still fresh with water.

## CONSUMPTION

1 kg/m² for 2 coats.

## PACKAGING

3.5 kg, 7.5 kg, and 15 kg rectangular bucket.

## STORAGE

**Mapelastic AquaDefense** can be stored for 24 months in its original packaging in a dry area. Protect from frost.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.com

PRODUCT FOR PROFESSIONAL USE

## TECHNICAL DATA (typical values)

| PRODUCT IDENTITY | |
|---|---|
| **Consistency:** | paste |
| **Colour:** | light blue |
| **Density:** | 1.30 g/cm³ |
| **pH:** | 9.5 |
| **Solid content:** | 66 |
| **Brookfield viscosity:** | 40,000 mPa·s<br>(needle 6 - 10 rpm) |

| APPLICATION DATA (at +23°C - 50% R.H.) | |
|---|---|
| **Minimum filming temperature:** | +5°C |
| **Recommended application temperature range:** | from +5°C to +35°C |
| **Waiting time between each coat:** | approx. 60 minutes (when dry touch) |
| **Waiting time before application of the covering:** | 3–4 hours |
| **Complete drying of 1 mm thick layer:** | 12 hours |

| FINAL PERFORMANCE (0.55 mm thickness) | | |
|---|---|---|
| **Performance characteristic** | **Requisiti secondo EN 14891** | **Performance figures** |
| **Initial adhesion (EN 14891-A.6.2):** | > 0.5 N/mm² | 1.7 N/mm² |
| **Adhesion after immersion in chlorinated water (EN 14891-A.6.3):** | > 0.5 N/mm² | > 1.0 N/mm² |
| **Adhesion after heat ageing (EN 14891-A.6.5):** | > 0.5 N/mm² | > 1.8 N/mm² |
| **Adhesion after freeze/thaw cycles (EN 14891-A.6.6):** | > 0.5 N/mm² | > 0.9 N/mm² |
| **Adhesion after immersion in alkaline water (lime water saturated solution) (EN 14891-A.6.9):** | > 0.5 N/mm² | > 1.3 N/mm² |
| **Adhesion after immersion in sodium hypochlorite solution (EN 14891-A.6.7):** | > 0.5 N/mm² | > 1.2 N/mm² |
| **Crack-bridging ability at +23°C (EN 14891-A.8.2):** | > 0.75 mm | 3.2 millimeters |
| **Crack-bridging ability at -5°C (EN 14891-A.8.3):** | > 0.75 mm | 1.6 millimeters |
| **Impermeability to water under pressure (EN 14891-A.7) (1500 kPa):** | No penetration | No penetration |

*Adhesion strength values according to EN 14891 determined with **Mapelastic AquaDefense** and type C2 cementitious adhesive in compliance with EN 12004*

## WARNING

*Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application.*

**Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com**

## 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 or replace requirements per the TDS in force at the time of the MAPEI product installation.*

*The most up-to-date TDS can be downloaded from our website www.mapei.com.*

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*ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.*

**Mapei S.p.A.**

Via Cafiero, 22, 20158, Milano

+39-02-376731 www.mapei.com mapei@mapei.it

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