



**MAPEI®**



# Mapelastastic AquaDefense



**Ready-to-use, ultra-quick drying, flexible liquid membrane for internal and external waterproofing applications**



## WHERE TO USE

To form waterproofing layers before applying ceramic, stone, mosaic, welded sheet vinyl and LVT coatings in:

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

**Mapelastastic AquaDefense** may be applied on:

- concrete;
- cementitious screeds and screeds made using special binders (**Topcem Pronto**, **Mapecem** or **Mapecem Pronto**);
- plasterboard (for internal applications only);
- fibre cement sheeting;
- existing coatings in ceramic, terrazzo and stone;
- cementitious render.

## ADVANTAGES

**Mapelastastic AquaDefense** offers the following advantages:

- no drill or mixing tools required, supplied ready-to-use;
- **Mapelastastic AquaDefense** complies with the current VOC limit requirements for the indoor pollutant/exposure to toxins credits in the relevant Green Star rating tools. See the SDS for the relevant information;

- resistant to rainwater 1 hour after applying the first coat and 3 hours after the second coat;
- tiles may be installed just 4 hours after applying the final coat (at +23°C and 50% R.H. when applied on a dry screed with less than 3% residual moisture);
- highly elastic at +23°C with 3.2 mm crack-bridging capacity without reinforcement;
- **Mapelastastic AquaDefense** is certified to AS/NZS 4858:2004 and AS 4654.1-2012 as a Class III non-exposed membrane for internal and external above-ground wet areas.

## TECHNICAL CHARACTERISTICS

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

**Mapelastastic AquaDefense** is easy to apply using a long-haired roller, brush or trowel on horizontal, sloping and vertical surfaces.

**Mapelastastic AquaDefense** dries very quickly to form a flexible membrane without a tacky surface. It is resistant to light pedestrian traffic after just 3 hours and forms an excellent grip with all types of adhesives for laying ceramic, stone material and mosaic of all kinds. The flexible nature of **Mapelastastic AquaDefense** helps it withstand normal movements caused by expansion and shrinkage of the substrate due to temperature variations and vibration.



# Mapelastick AquaDefense



Impregnating Drain Vertical fabric with Mapelastick AquaDefense



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



Application of the first coat of Mapelastick AquaDefense on a screed

Tiles installed on **Mapelastick AquaDefense** by using C2F-class MAPEI adhesives (such as **Keraquick Maxi S1** or **Granirapid**.) and grouted with **Ultracolor Plus** may be opened to pedestrian traffic within 12 hours of starting the work.

**Mapelastick AquaDefense** is resistant to water, lime-water (ph > 12), water containing chlorine and detergents commonly used for cleaning residential environments.

## RECOMMENDATIONS

- Do not apply **Mapelastick AquaDefense** if the temperature is lower than +5°C.
- **Mapelastick AquaDefense** must always be covered with a suitable covering.
- Do not apply **Mapelastick AquaDefense** on substrates with a moisture content of more than 3% (surface moisture meter) or if rising damp is present. Ensure cementitious substrates are well cured.
- Do not apply **Mapelastick AquaDefense** on crumbly cementitious substrates, old floors which are not well bonded to the substrate or surface treatments which impede a good bond.
- Cracks larger than a hairline crack (<0.2 mm) must be repaired prior to waterproofing.
- Protect the surface from rain for at least 1 hour after applying the first coat and 3 hours after applying the second coat
- All timings on this TDS refer to +23°C and 50% relative humidity environment over a dry and absorbent substrate. Areas with cold climates, low ventilation, and non-absorbent substrates will lengthen these times.

## 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 compromise the bond. Cementitious substrates must be stable and dry with no rising damp. Surface dust must be completely removed.

Smoothing and levelling layers may be applied using **Planitop Fast 330** or **Adesilex P4**.

On old ceramic floors with hollowed or empty tile joints, or whenever slopes on surfaces need to be levelled out before spreading on **Mapelastick AquaDefense**, we recommend applying a smoothing and levelling layer using **Adesilex P4**. Substrates in this condition 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 or by abrasion. Prime the prepared tiles with **Eco Prim Grip Plus**.

Before applying **Mapelastick AquaDefense**, pay particular attention to expansion joints and fillet joints between horizontal and vertical surfaces. In such cases, apply a product from the **Mapeband** range along with the suitable profiles bonded in place with **Mapelastick AquaDefense**.

Structural joints must be waterproofed with **Mapeband TPE** or **Mapeband Flex Roll** bonded to the substrate with **Adesilex PG4**.

## APPLICATION OF THE PRODUCT

**Mapelastick AquaDefense** must be applied in two even coats (minimum 0.4 mm wet film thickness per coat) with a long-haired 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 diagonally to the first (approximately 1 hour).

The final thickness of the two coats of **Mapelastick AquaDefense** must be at least 0.8 mm in order to create a robust, flexible and continuous film. Make sure there are no interruptions in the film caused by imperfections in the substrate.

If **Mapelastick AquaDefense** is applied on substrates with hairline or repaired cracks, it is highly recommended to insert **Mapetex 50** reinforcement into the first wet coat. **Mapetex 50** must be pressed down with a flat trowel or spiked roller into the first coat of **Mapelastick 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.

If a flood test is required, it may be carried out 12-24 hours after applying the final coat of **Mapelastick AquaDefense**. Ensure the membrane is completely dry.

Ceramic, stone and mosaic tiles may be installed 4 hours after applying the second coat using a C2-class MAPEI adhesive according to AS ISO 13007.1 standards, to be selected according to the final use of the floor or coating. For example, on balconies use **Keraflex Maxi S1** (class C2TE S1). For quickly laying tiles use **Keraquick Maxi S1** (Class C2FT S1) or **Granirapid** (Class C2F S1) and for laying all types of mosaic use **Kerabond Plus** mixed with **Isolastic 50** (Class C2T S1).

Grout tile joints with a special cementitious grout such as **Ultracolor Plus** - Class CG2 WAF, **Keracolor FF**, **Keracolor GG** (mixed with **Fugolastic**) or epoxy grout (for example **Kerapoxy**, **Kerapoxy Design** Class RG). Seal expansion joints with a special MAPEI sealant (such as **Mapesil AC** or **Mapesil LM** according to requirements).

Before laying the tiling, carefully check the surface of **Mapelastick AquaDefense** to

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Consistency:	paste
Colour:	light blue
Density (g/cm <sup>3</sup> ):	1.30
pH:	9.5
Dry solids content:	66
Brookfield Viscosity (mPa·s):	45,000 (spindle 6 - 10 rpm)

### APPLICATION DATA (at +23°C - 50% R.H.)

Minimum filming temperature:	+5°C
Recommended application temperature:	from +5°C to +35°C
Waiting time between first and second coat:	approximately 60 minutes (when dry to the touch)
Waiting time before laying coating:	3-4 hours
Complete drying of 1 mm (WFT) thick layer:	12 hours

### FINAL PERFORMANCE

	EN 14891 acceptance range	Performance figures for Mapelastac AquaDefense
Initial bond strength EN 14891-A.6.2 (N/mm <sup>2</sup> ):	> 0.5	1.7
Bond strength after immersion in water (EN 14891-A.6.3) (N/mm <sup>2</sup> ):	> 0.5	> 1.0
Bond strength after application of heat source (EN 14891-A.6.5) (N/mm <sup>2</sup> ):	> 0.5	> 1.8
Bond strength after freeze-thaw cycles (EN 14891-A.6.6) (N/mm <sup>2</sup> ):	> 0.5	> 0.9
Bond strength after immersion in basic water (solution saturated with lime) (EN 14891-A.6.9) (N/mm <sup>2</sup> ):	> 0.5	> 1.3
Bond strength after immersion in sodium hypochlorite solution (EN 14891-A.6.7) (N/mm <sup>2</sup> ):	> 0.5	> 1.2
Crack-bridging ability at +23°C (EN 14891-A.8.2) (mm):	> 0.75	3.2
Crack-bridging ability at -5°C (EN 14891-A.8.3) (mm):	> 0.75	1.6
Impermeability to water under pressure (EN 14891-A.7) (1500 kPa):	no penetration	no penetration



Application by roller of Mapelastac AquaDefense second coat



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



Bonding tiles on Mapelastac AquaDefense

Bond values according to EN 14891 measured using **Mapelastac AquaDefense** and a C2-type cementitious adhesive according to EN 12004

# Mapelastic AquaDefense

make sure it is continuous and that there are no pin-holes or small craters. If there are such defects, apply a further thin coat where they are located.

Before applying a resilient flooring, prime with **Eco Prime T Plus** undiluted and smooth with two coats of **Planiprep SC**.

## Cleaning

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

## CONSUMPTION

1 kg/m<sup>2</sup> for two coats (1.3 kg/m<sup>2</sup> per mm of thickness).

## PACKAGING

15 kg rectangular buckets.

## STORAGE

**Mapelastic AquaDefense** may be stored for up to 24 months in its original packaging in a dry place. Protect from freezing weather.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet available from [www.mapei.com.au](http://www.mapei.com.au).

PRODUCT FOR PROFESSIONAL USE.

## 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. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.*

**Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.com.au](http://www.mapei.com.au).**

## 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 at [www.mapei.com.au](http://www.mapei.com.au). ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.***

**All relevant references for the product are available upon request and from [www.mapei.com.au](http://www.mapei.com.au)**

**KEVMOR**  
TRADE SUPPLIES

### Kevmor Trade Supplies

11 Belmont Avenue, Belmont WA 6104

P: 08 9277 7177

E: [sales@kevmor.com.au](mailto:sales@kevmor.com.au)

W: [kevmor.com.au](http://kevmor.com.au)



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