

SYSTEM FOR THE **INSTALLATION OF TILES IN BATHROOMS AND DAMP ENVIRONMENTS**



PART 1 SYSTEM

1.1 REFERENCES

A. Australian Standard(s):

1. AS 3958.1-2007 – Ceramic Tiles; Part 1: Guide to the Installation of Ceramic Tiles
2. AS 3740-2010 – Waterproofing of domestic wet areas

B. MAPEI Technical Notebook(s):

1. [Installation of Heated Screeds and Substrates for Laying Floors](#)
2. [Laying Stone Materials](#)
3. [Guide for the Installation of Ceramic Materials](#)

C. Other References:

1. ASAA Natural Stone Manual

1.2 SUBSTRATE PREPARATION

All substrates must be structurally sound, dry, solid and stable. Any laitance, dust, grease, oil, paint or curing compounds present on the surface of the concrete substrate that may inhibit bond, shall be mechanically removed. The substrate should then be cleaned and prepared in accordance with the relevant standards and as per the MAPEI technical data sheets (TDS).

1.3 WATERPROOFING MEMBRANE

- **NOTE:** Prior to the application of the waterproofing membrane:

- ◇ Apply a bond breaker/tape with **MAPEBAND** (337-3-2018 GB), **MAPEBAND EASY** (7631-6-2017 GB) or **MAPEBAND SA** (2179-10-2013) or a flexible fillet with **MAPEFLEX PU45 FT** (8102-10-2016 GB) at all wall/wall, wall/floor junctions and all other areas where movement is expected. Ensure flexible fillet is dry and fully cured if used before applying membrane.
- ◇ Ensure substrate has adequate falls in accordance with AS 3740. If not, apply a screed which incorporates falls.

Waterproofing membrane to be chosen from the following options:

A. MAPELASTIC AQUADEFENSE (2103-11-2014 GB)

1. Ready-to-use, ultra-quick drying, flexible liquid membrane for internal and external waterproofing applications. Applied at a minimum 0.4 mm per coat.

B. MAPEGUM WPS (2014-12-2012)

1. Fast drying flexible liquid membrane for waterproofing. Applied at a minimum 0.5 mm per coat.

C. AQUAFLEX WPU (7671-06-2018 AUS)

1. Ready-to-use, quick drying and flexible Class III water-based hybrid polyurethane membrane for internal and external waterproofing applications. Applied at a thickness of at least 0.75 mm.



- **APPLICATION:**

- ◇ Waterproofing membrane must be applied to walls and floors in a minimum of two even coats to form a final flexible, continuous dry film thickness in accordance with which membrane was used.
- ◇ (FC Sheeting) It is recommended to reinforce with **MAPETEX SEL** (911-12-2016 GB) or **MAPETEX 50** (956-2-2018 GB) at the sheet joints by embedding in the first membrane coat in accordance with the TDS.
- ◇ Floor waterproofing membrane to be returned up wall substrates over the bond breaker/tape or flexible fillet in accordance with AS 3740 and the TDS, and returned down into wastes.
- ◇ Wall waterproofing membrane to be returned down across the floor substrate over the cured bond breaker/tape or flexible fillet.

1.4 SCREED – IF REQUIRED

Screed to be chosen from the following options:

- A. **TOPCEM PRONTO (209-7-2017 AUS)** - **GOOD SOLUTION**
 - 1. Ready-to-use normal setting, controlled-shrinkage mortar for quick-drying screeds (4 days).
- B. **MAPECEM PRONTO (210-07-2017 AUS)** - **BEST SOLUTION**
 - 1. Pre-blended, ready-to-use, quick-setting and drying (24 hours), controlled-shrinkage mortar for screeds.

- **APPLICATION:**

- ◇ Mix and apply in strict accordance with the TDS based on bonded or unbonded application, paying attention to the surrounding environmental conditions. Incorporate falls in accordance with AS 3740.
- ◇ Ensure the appropriate minimum thickness is applied.

1.5 WATERPROOFING MEMBRANE – IF SCREED WAS USED

- **NOTE:** Prior to the application of the waterproofing membrane:
 - ◇ Apply a bond breaker/tape with **MAPEBAND** (337-3-2018 GB), **MAPEBAND EASY** (7631-6-2017 GB) or **MAPEBAND SA** (2179-10-2013) or a flexible fillet with **MAPEFLEX PU45 FT** (8102-10-2016 GB) at all wall/wall, wall/floor junctions and all other areas where movement is expected. Ensure flexible fillet is dry and fully cured if used before applying membrane.

Waterproofing membrane to be chosen from the following options:

- A. **MAPELASTIC AQUADEFENSE (2103-11-2014 GB)**
 - 1. Ready-to-use, ultra-quick drying, flexible liquid membrane for internal and external waterproofing applications. Applied at a minimum 0.4 mm per coat.
- B. **MAPEGUM WPS (2014-12-2012)**
 - 1. Fast drying flexible liquid membrane for waterproofing. Applied at a minimum 0.5 mm per coat.
- C. **AQUAFLEX WPU (7671-06-2018 AUS)**
 - 1. Ready-to-use, quick drying and flexible Class III water-based hybrid polyurethane membrane for internal and external waterproofing applications. Applied at a thickness of at least 0.75 mm.



- **APPLICATION:**

- ◇ Waterproofing membrane must be applied to walls and floors in a minimum of two even coats to form a final flexible, continuous dry film thickness in accordance with which membrane was used.
- ◇ Floor waterproofing membrane to be returned up wall substrates over the bond breaker/tape or flexible fillet in accordance with AS 3740 and the TDS, and returned down into wastes.

1.6 ADHESIVE

- **NOTE:** Some natural stones can be prone to warping and staining, therefore MAPEI recommends when using natural stone to consult the manufacturer/supplier for any recommendations or guidelines. Adhesive selection for natural stone is also dependant on its moisture sensitiveness, which is represented by a class system. Please refer to EN14617 and MAPEI technical notebook: Laying Stone Materials for more information.

Adhesive to be chosen from the following options:

A. KERAFLEX MAXI S1 (74-04-2017 AUS) – Normal Set

1. High performance, deformable cementitious adhesive with an extended open time and no vertical slip, for ceramic tiles. Especially suitable for the installation of large porcelain tiles and natural stone (non-moisture sensitive, Class A).

B. KERAQUICK S1 (103-06-2016 AUS) – Rapid Set

1. High performance, deformable, fast setting cementitious adhesive with no vertical slip, for ceramic tiles and stone material (Class A/B*).

- **APPLICATION:**

- ◇ Prepare and mix adhesive in strict accordance to the packaging and TDS.
- ◇ To ensure good adhesion, apply with pressure a thin coat of the adhesive with the straight edge of the trowel. Immediately follow this with a layer of adhesive at the correct thickness using a suitable notched trowel.
- ◇ Adhesive should also be pressure applied to the back of the tile/stone with a thin coat using the straight edge of the trowel (*back-buttering*).
- ◇ Ensure the adhesive stays “fresh” and does not form a skin, especially in hot environments, prior to the application of the tile/stone.
- ◇ Place the tile/stone firmly into position wet-on-wet with a slight back and forward motion perpendicular to the trowel lines to collapse the notches.
- ◇ It is recommended to periodically remove and assess adhesive coverage. Continue if acceptable, otherwise reassess trowel and application technique.



1.7 GROUT

- **NOTE:** Prior to the application of the grout, ensure the joints are clean, free of dust and empty down to at least 2/3 of the thickness of the tiles. It is then suggested to carry out a 1 m² sample area for approval by the architect.

Grout to be chosen from the following options:

- A. KERACOLOR RANGE** - **GOOD SOLUTION**
1. High performance, polymer-modified, cement-base grouts.
- B. ULTRACOLOR PLUS (2801-3-2018 GB)** - **BETTER SOLUTION**
1. High-performance, anti-efflorescence, quick-setting and drying polymer-modified mortar with water-repellent technology
- C. KERAPOXY (141-11-2016)** - **BEST SOLUTION**
1. Two component, acid resistant epoxy grout for joints of at least 3 mm.
- **APPLICATION:**
 - ◇ Fill the joints completely with the grout using the appropriate trowel or rubber float, ensuring the joints are completely compacted with no unevenness.
 - ◇ Remove excess grout while still fresh from the surface of the tile/stone by moving the float diagonally across the joints.

1.8 SILICONE

- **NOTE:** Prior to the application of silicone, it is recommended that the silicone is applied in a test area to be approved by the client and to ensure it doesn't stain the stone/tile.

Silicone to be chosen from the following options:

- A. MAPESIL AC (401-4-2017 GB) – Ceramic/Porcelain**
1. Solvent-free, acetic crosslinking mildew resistant silicone sealant.
- B. MAPESIL LM (408-1-2015 GB) – Stone**
1. Neutral mould resistant silicone sealant for stone and marble.
- **APPLICATION**
 - ◇ Movement joints should be installed in accordance with AS 3958.1-2007.

MAPEI provides technical data sheets (TDS) for all products which should be read in conjunction with this WMS. The TDS can be obtained from www.mapei.com.au or by clicking directly on the listed products within the PDF. This Work Method Statement (WMS) provides general recommendations only and is not intended to be interpreted as a generic specification for the application/installation of the listed products. As each project differs in exposure and site conditions, specific recommendations may vary from the information contained above. For recommendations for specific applications/installations please contact MAPEI Australia Pty Ltd.



	PRODUCTS FOR CERAMICS AND STONE MATERIAL		PRODUCTS FOR MASONRY RESTORATION
	PRODUCTS FOR RESILIENT AND TEXTILE MATERIALS		WALL PROTECTIVE AND DECORATIVE COATINGS
	PRODUCTS FOR TIMBER FLOORING		WATERPROOFING
	PRODUCTS FOR CEMENTITIOUS AND RESIN FLOOR COVERING		PRODUCTS FOR UNDERGROUND CONSTRUCTIONS (UTT)
	BUILDING SPECIALTY PRODUCTS		ELASTIC SEALANTS AND ADHESIVES
	ADMIXTURES FOR CONCRETE		PRODUCTS FOR SPORTS FLOORING
	PRODUCTS FOR STRUCTURAL STRENGTHENING		CEMENT ADDITIVES (C-ADD)

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