PART 1 DETAILS

1.1 REFERENCES

A. Australian Standard(s):

1. AS 2455.1-2019 – Textile floor coverings – Installation practice – Part 1: General
2. AS 2455.2-2019 – Textile floor coverings – Installation practice – Part 2: Carpet Tiles
3. AS 3958.1-2007 – Ceramic Tiles; Part 1: Guide to the Installation of Ceramic Tiles

B. MAPEI Technical Notebook(s):

1. Installation of Heated Screeds and Substrates for Laying Floors
2. Floor Covering Substrate Preparation Guide
3. Laying Stone Materials
4. Guide for the Installation of Ceramic Materials
5. Ceramic Substrate Preparation Guide

C. Other References:

1. Australasian Timber Flooring Association (ATFA)
2. ASAA Natural Stone Manual
3. Uponor Minitec Installation Instructions and Documentation

1.2 SUBSTRATE PREPARATION

1. **General:** All substrates (e.g. concrete, existing tiles, structural wood-based) must be structurally sound, dry, solid and stable. Any laitance, dust, grease, oil, paint, existing coatings or curing compounds present on the surface of the 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).
2. **Existing tiled substrate:** Any existing loose/dummy tiles and loose/weak/cracked grout with large/deep joints should be removed and filled with **PLANITOP FAST 330** or **NIVORAPID**.

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. Each project differs in exposure/condition, therefore specific recommendations may vary from the information contained above. For further information or recommendations for applications/installations, please contact MAPEI Technical Assistance Department.

PART 2 LEVELING AND HEATING SYSTEM

2.1 MOISTURE VAPOUR BARRIER – CONCRETE SUBSTRATES UNDER TIMBER/TEXTILE FLOORING

A. MAPEPROOF 1K TURBO (2918-02-2018 AUS) *<95% RH, min. 28 day old concrete*

One component, solvent free, moisture curing and rapid drying polyurethane surface membrane with a very low emission of VOC's.

- **APPLICATION:**
  - ◊ Apply moisture vapour barrier (MVB) with a roller or brush in 2 coats.
  - ◊ Completely saturate the final fresh coat of the moisture vapour barrier with **QUARTZ 0.9 AU**. Once the moisture vapour barrier is dry and fully cured, all excess sand is to be removed via vacuum cleaning and the area is to be inspected for any bald spots (*where the moisture vapour barrier has no sand*). All bald spots must receive an additional coat of moisture vapour barrier, saturated with **QUARTZ 0.9 AU** as detailed above.

2.2 PRIMER – NOT REQUIRED IF MVB INSTALLED

A. ECO PRIM T PLUS (2930-04-2018 AUS)

Solvent free acrylic primer in water dispersion with very low emissions of VOC's.

- **APPLICATION:**
  - ◊ **(Existing tiles and wood-based substrates)** Apply the primer using a brush or roller undiluted in accordance with the TDS.
  - ◊ **(Over concrete)** Apply the primer diluted with 2 parts clean water in accordance with the TDS.
  - ◊ Ensure no puddling of the primer occurs.
  - ◊ For best adhesion, apply subsequent levelling compound within 24-36 hours. If primer is left open too long or it is contaminated, there is an increased risk of cracking.

2.3 LEVELLING COMPOUND – IF REQUIRED

- **NOTE:** For structural wood-based substrates, the levelling compound must be applied and at a thickness of 5 mm. Otherwise levelling compound is used where required to rectify the substrate.

A. ULTRAPLAN RENOVATION (4013-05-2019 AUS)

Fibre reinforced levelling compound for interiors applied from 3 to 40 mm in a single application.

- **APPLICATION:**
  - ◊ Pour 3.4 to 3.6 litres of potable water into a clean container then add the 20 kg bag of **ULTRAPLAN RENOVATION** while using an electric mixer. Once a lump-free mix is obtained, let it stand for 2 to 3 minutes then briefly remix.
  - ◊ Spread levelling compound from 3 to 40 mm in thickness using a large metal spreader at a slight angle to obtain the desired thickness.

2.4 HEATING SYSTEM

A. Uponor Minitec Underflooring Heating System

- **APPLICATION:**
  - ◊ If a levelling compound was applied prior to the heating system, prime it with **ECO PRIM T PLUS** diluted with 2 parts clean water. Allow 20 minutes to dry prior to installing heating system.
  - ◊ Install in accordance with the manufacturer's instructions.

2.5 LEVELLING COMPOUND

A. ULTRAPLAN RENOVATION (4013-05-2019 AUS)

Fibre reinforced levelling compound for interiors applied from 3 to 40 mm in a single application.

- **APPLICATION:**
  - ◊ Pour 3.4 to 3.6 litres of potable water into a clean container then add the 20 kg bag of **ULTRAPLAN RENOVATION** while using an electric mixer. Once a lump-free mix is obtained, let it stand for 2 to 3 minutes then briefly remix.
  - ◊ Spread levelling compound from 15 to 40 mm in thickness using a large metal spreader at a slight angle to obtain the desired thickness.
  - ◊ Ensure levelling compound covers top of the heating system by at least 5 mm.

PART 3 FLOORING OPTION A: TIMBER

3.1 ADHESIVE

- **NOTE:** Prior to the application of the adhesive, ensure the floor covering and substrate are acclimatized to the recommended temperatures and R.H.

A. ULTRABOND ECO S955 1K (270-2-2016 GB)

One component, solvent free, sililated polymer-based adhesive with a very low emission level of volatile organic compounds for all types of parquet.

- **APPLICATION:**
  - ◊ Apply adhesive evenly over substrate with Mapei notched trowel for wood.

PART 4 FLOORING OPTION B: TEXTILE

4.1 ADHESIVE

- **NOTE:** Prior to the application of the adhesive, ensure the floor covering and substrate are acclimatized to the recommended temperatures and R.H.

Adhesive to be chosen from the following options:

A. ULTRABOND ECO FIX (214-1-2016 GB) – Carpet tiles

Adhesive in water dispersion with very low emission of volatile organic compounds, with permanent tack for dry-lay floor tiles.

B. ULTRABOND ECO V4 EVOLUTION (5862-8-2019 GB)

Universal “all in one” adhesive with fast and strong initial tack and long open time for resilient and textile floor and wall coverings.

- **APPLICATION:**
  - ◊ Apply adhesive using an appropriate trowel evenly on as much of the substrate that can be covered with flooring whilst the adhesive is still fresh.

PART 5 FLOORING OPTION C: TILE

5.1 ADHESIVE

- **NOTE:** Some natural stones can be subjected 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:

Normal-Set

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

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).

B. ULTRALITE S2 (30-7-2017 AUS)

One-component, high performance, highly-deformable, lightweight cementitious adhesive with extended open time and very high yield, easy to trowel and good buttering capacity with very low emission of volatile organic compounds, for ceramic tiles and stone material, ideal for thin porcelain tiles.

Rapid-Set

C. KERAQUICK S1 (103-06-2016 AUS)

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.

5.2 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 m^2 sample area for approval by the architect.

Grout to be chosen from the following options:

A. **KERACOLOR RANGE** **- GOOD SOLUTION**

High performance, polymer-modified, cement-base grouts.

B. **ULTRACOLOR PLUS (2801-3-2018 GB)** **- BETTER SOLUTION**

High-performance, anti-efflorescence, quick-setting and drying polymer-modified mortar with water-repellent technology

- **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.

5.3 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**

Solvent-free, acetic crosslinking mildew resistant silicone sealant.

B. **MAPESIL LM (408-1-2015 GB) – Stone**

Neutral mould resistant silicone sealant for stone and marble.

- **APPLICATION**
  - ◊ Movement joints should be installed in accordance with AS3958.1-2007.