

---

Installation  
Care and  
Maintenance Guide

---

Tiles

**FIBONACCI  
STONE**



---

## INTRODUCTION

The integrity and lifecycle of a floor system is dependent on the design, materials and installation methods used to construct it, as well as the building's environmental factors and climate the floor system is exposed to. A successful, long lasting floor system requires accurate planning and co-ordination, careful and responsible installation followed by an appropriate care and maintenance regime.

The intention of this guide is to share with our customers our knowledge and experience associated with our products and the use of our products. All information provided in this document must be read and interpreted in conjunction with relevant industry codes and standards. All installations/floor systems have unique requirements and circumstances associated with them, and the products utilised may have different characteristics that make them not compatible, more or less suitable, or simply suitable for the intended application. Where there is conflicting recommendations to that specified in a code or standard please contact Fibonacci Stone for further clarification and support.

All floor systems/installations must meet the relevant industry codes and standards. We advise you obtain a copy of the relevant industry standards. For information about industry standards or to obtain a copy a standard go to [saiglobal.com](http://saiglobal.com)

**IMPORTANT** It is important to select the right materials for the installation, ensure you are using proprietary materials and check, their compatibility in accordance with the manufacturer's recommendations. When installing Fibonacci Stone products, methods of installation are to be in accordance with the relevant standards and/or "best practice" industry standard. Always refer to the latest Installer's Guide.



### Product Composition

Fibonacci Stone Terrazzo Tiles are produced finished and do not require further polishing following installation. Tiles are manufactured using specialized techniques with the final product consisting of more than 75% natural stone bonded with an inorganic binder (portland cement) and pigment oxides used for colour. This allows the density to increase, resulting an exceptionally strong but thin profile product with excellent physical mechanical properties. Fibonacci Stone terrazzo tiles will continue to harden over time and become more resilient to their environment.

### Aesthetic

Tonal variation in the final aesthetic will appear due to the raw material content of the tile and following installation the tiles will develop a unique patina responding to the final environment.

### Finished

Unlike other terrazzo tiles, Fibonacci Stone tiles are produced finished and do not require machine polishing following installation, however this is an option to achieve a seamless floor finish (refer to Seamless Floor Finish Guide).

### Edging and Profiles

Completely homogenous, terrazzo tiles can be profiled to create edging as required. Only use experienced stonemasons with required tools and methods to achieve the required result.

### Slip Resistance

All Fibonacci Stone products are produced standard in a Honed finish which is suitable for most internal

domestic and commercial areas however the finish can be modified to achieve a higher slip rating as a special production order or by treating the tile in-situ following installation. All products are tested to AS 4586-2013 and Slip Resistance Test Reports are available upon request.

### Storage and Handling

- Store tiles in a dry secure warehouse.
- Do not store tiles in direct sunlight or in high temperatures.
- Do not stack pallets.
- Protect tiles/pallets from rain or wet conditions.
- Protect from high levels of dust.

It is important to inspect the tiles thoroughly when received and/or prior to installation. Check to delivery for noticeable signs of damage to crates that may have occurred during transit and advise both the delivery driver and Fibonacci Stone of any higher than normal damage.

Unpack tiles with care prior to installation and inspect the tiles for any quality imperfections. Minor marks, chipping and small pinholes may appear in the tile and are not structural and therefore are not considered defects. Tiles with excessive chipping or marking from polishing should be used for cuts or may be subject to a warranty claim.

Fibonacci Stone Terrazzo Tiles are supplied ready to install except when a special production for a specific project is required, which in this circumstance it is required to Season the tiles prior to installation.

**NOTE** Always confirm if the tiles are seasoned prior to installation. For more information contact **1300 342 662** or **info@fibonaccistone.com.au**.

### Meeting Performance Requirements

Prior to beginning your installation it is important to gain a thorough understanding of the application. Obtain information from the designer/engineer/head contractor any structural conditions such as, ground or building movement, excessive deflection or delayed shrinkage onset of the substrate and environmental conditions such as excessive water, sunlight, heat or frost. This will assist you in the correct selection of materials and methods used for your installation.

For applications in an existing building or over substrates that have been in place for a long period of time, check the substrate for cracking or signs of obvious movement that may affect the new floor system performance. Keep in mind different floor finishes respond to movement differently. This can assist you to isolate or rectify any structural issues prior to the installation of your new floor finish.

Confirm the loading and wear parameters of the installation and determine the correct materials and method of installation to achieve the required performance level of the installation.

### Differential Movement in the Structure or Substrate

Movement in the structure or substrate is the most common cause of a reduced lifecycle of a floor system. Planning for anticipated and/or expected movement is challenging and often overlooked.

**Consult with the structural engineer of the building to obtain confirmation of the expected movement of the building and the substrate**

Cracks occur when forces either externally, internally within a building, or as a result of chemical changes within the building's materials are greater than the floor system can withstand.

Common causes of cracking in a structural concrete slab are shrinking during curing and ground movement. It is important to ensure the concrete slab is allowed to equilibrate ensuring the moisture level is at an acceptable level throughout the entire slab. Although the surface moisture level may be suitable for adhesion, the slab will continue to shrink as it still contains moisture. Excess moisture, shrinkage, deflection, impurities may cause delamination, reduced bond strength and/or cracking in the tiled surface. Cracking and movement can be structurally dangerous. Differential movement throughout a building may be a consequence of poor design, ageing or changing environmental conditions to which a rigid building cannot adapt without fracturing.



## Substrate

Adequacy is imperative to the installation performance as excess moisture, shrinkage, deflection, impurities may cause delamination, reduced bond strength and/or cracking in the tiled surface.

**NOTE 1** Consult with the head contractor/ structural engineer of the building to obtain confirmation of the expected movement of the building and the substrate.

**NOTE 2** For information regarding appropriate finish to suit fixing method and materials, contact your Mapei specialist for a recommendation and/or information about their products before making your final decision. Paul Buckley [p.buckley@mapei.com.au](mailto:p.buckley@mapei.com.au) or visit [mapei.com.au](http://mapei.com.au)

Prior to beginning your installation confirm the following:

### New Reinforced Concrete Substrate/Slab

Is constructed in accordance with the relevant industry standard, particularly with regard to shrinkage. New concrete floors intended for tiling should be provided with an appropriate finish to suit the method of fixing to be used.

### Existing Reinforced Concrete Substrate/Slab

Is checked for cracking or signs of obvious movement that may affect the new floor system performance. Concrete floors intended for tiling should be provided with an appropriate finish to suit the method of fixing to be used.

### New Framed Substrate/Floor

Construction of the substructure and the fixing of sheet materials as a background for floor tiling is in accordance with the relevant standard. New floors intended for tiling should be provided with an appropriate finish to suit the method of fixing to be used.

### Existing Framed Substrate/Floor

Is checked for cracking or signs of obvious movement that may affect the new floor system performance. Floors intended for tiling should be provided with an appropriate finish to suit the method of fixing to be used.

## Setting Out

Setting your installation should be related to the siting of movement joints. Movement joints should be detailed on working drawings by the engineer should be strictly adhered to.

## Movement Joints

These are discontinuities in the tile surface intended to perform the following functions:

- a) Separation of the tiled surface from fixed elements such as columns and walls.
- b) Subdivision of large areas of tiled surface into smaller sections to compensate for induced strain from various causes.
- c) To interrupt the tiled surface to match discontinuities in the substrate such as construction joints and movement joints.

When installing terrazzo tiles we recommend **LATHAM** Proprietary Joints [latham-australia.com](http://latham-australia.com) in accordance with the relevant standard. For latest information about Australian Standards or to obtain a copy a standard go to [saiglobal.com](http://saiglobal.com).

Sometimes it is necessary for their positioning to be left to the discretion of the contractor. In such circumstances consult your **LATHAM** specialist. [latham-australia.com](http://latham-australia.com).

## Set-Down

Requirements can vary in accordance with specific requirements of the installation as well as tile thickness, adhesive bed and the thickness of the screed or levelling material (when required). The set-down can be formulated by measuring the following:

- Tile thickness
- Adhesive bed (as per manufacturer's recommendation)
- Levelling compound (as per manufacturer's recommendation) if required
- Cement Screed (in accordance with the relevant standard) if required

Screed thickness may vary according to final installation and must be installed in accordance with the relevant building code and respect the relevant Australian Standard. For latest information about Australian Standards or to obtain a copy a standard go to [saiglobal.com](http://saiglobal.com).

Contact Fibonacci Stone at **1300 342 662** or email at [info@fibonaccistone.com.au](mailto:info@fibonaccistone.com.au) for further assistance.



### Substrate Surface Preparation

Must be in accordance with Australian Standards for the specific background you will be adhering to ensuring the surface is adequate for maximum bond. The following are typical methods and requirements to assist you.

- Ensure the substrate is clean and free from impurities and debris.
- Reinforced Concrete Slabs or Screeds must be cured to a minimum of 5.5% moisture content.
- Prepare the substrate with a suitable primer and or where water can penetrate the tile from below (or behind) ensure the correct waterproofing membranes are installed. We recommend using a reputable, professional waterproofing contractor for these installations.
- Protect and ensure the primed or waterproofed surface is free of impurities, dust, debris, before beginning the installation of tiles.

We advise you contact your Mapei specialist for a recommendation and/or information about their products before making your final decision. Contact Mapei at [mapei.com.au](http://mapei.com.au) for further information.

### Primers

When using primers, attention is drawn to the need for complete compatibility between –

- a) the substrate and all primers used on the substrate; and
- b) the particular adhesive used to fasten the tiles to the substrate.

For typical installations over a reinforced solid concrete substrate we recommend **MAPEI PRIMER G**. We advise you contact your Mapei specialist for a recommendation and/or information about their products before making your final decision. Contact Mapei at [mapei.com.au](http://mapei.com.au) for further information.

### Adhesives

The right choice of adhesive is essential for correct installation. For typical installations we recommend the two-component rapid-setting hydrating cementitious adhesive **GRANIRAPID** from – Mapei Australia Pty Ltd [mapei.com.au](http://mapei.com.au).

### Finished Surface

The surface of the tiled surface should be flat and true to within tolerance. Lippage is inherent to all installations but should be kept to a minimum. Recommend finished tolerances as follows:

- Flatness:  $\pm 4\text{mm}$  in 2m from the required plane.
- Lippage: should not exceed 1.5mm between two adjacent tiles.

### Joint Width

Joint width of your installation must be specified to ensure the final installation meets not only the aesthetic intent but also a set standard. When specifying terrazzo tiles we recommend in accordance with Australian Standards.

**INTERNAL** Floors: (3mm) Walls: (2mm)

**EXTERNAL** Floors: (3-5mm) Walls: (2-3mm)  
(depending on tile format)

**NOTE** Joint widths can be varied depending on installation. Should you require assistance, please contact our technical support team on **1300 342 662** or email [info@fibonaccistone.com.au](mailto:info@fibonaccistone.com.au)

### Bonding

In accordance with Australian Standards tiles sizes 40x40cm or greater require the installation method of “back buttering” the tiles when installing. This method incorporates a thin coat of adhesive to the entire back of the tile and then laying onto the adhesive bed. This ensures 100% coverage of the tile to achieve maximum bond.

### Grouting Materials

Selecting the appropriate grout is directly related to the required or expected performance of the completed floor system. Proprietary epoxy or high performance cementitious grouts certified by the manufacturer to relevant industry standards are appropriate. Terrazzo Tiles are porous and extra care should be taken when grouting.

- Allow 5 -7 days before grouting unless additional time is recommended by the grout manufacturer.
- Clean Joints of any excess adhesive or debris.
- Ensure that joints are filled completely.
- Completely cover the entire surface of the tile with grout to fill any small pinholes or imperfections and to avoid “framing” should any grout not be removed.
- Do not use dark or contrasting grout.
- Ensure excess grout is immediately removed. Do not allow grout to dry on the surface of the tile, as it will become difficult to remove. (Use proprietary grout cleaners)

We recommend **MAPEI – ULTRACOLOUR PLUS** from – Mapei Australia Pty Ltd [mapei.com.au](http://mapei.com.au).

### Sealants

Only neutral-curing silicone sealants that do not cause any migratory staining on natural stone be used with Fibonacc Stone. We recommend you confirm the technical characteristics with the manufacturer before commencing. We recommend silicone materials as follows: **MAXISIL “N” NATURAL STONE SILICONE**

We advise you contact the manufacturer for a recommendation and/or information about their products before making your final decision.



## During and Following Installation

Ensure the tiles are protected during and immediately following installation and appoint a reputable sealing contractor carry out all cleaning and sealing applications. This is also an integral part to the handover process to the client or the cleaning contractor.

- Protect installation from construction damage.
- Protect tiled surface from acid and alkaline.
- Do not use scissor lifts on the installation until installation/adhesive is completely cured.
- Protect the tiles from stains, abrasions and excess water.
- Do not use products that contain acid or alkaline.
- Remove large grit particles that may scratch the surface using a suitable static mop, broom or other depending on the surface finish of the terrazzo tile.
- Remove any adhesive, corking and grout residue using a suitable scrapper.
- Clean floor with a PH Neutral Detergent using an auto-scrubber fitted with cleaning pad/brush suitable for the surface finish of the tiles.
- Clean edges and hard to reach places using a mini-scrubber fitted with a cleaning pad/brush suitable for the surface finish of the tiles.
- Clean any excess water using a wet vacuum or mop immediately to avoid dirty water pooling on the surface.
- For honed surfaces buff the floor using a buffing machine fitted with a suitable buffing pad.
- Apply the recommended sealer to the tiles in accordance with the manufacturers specifications. Recommend sealer: **AQUAMIX SEALERS CHOICE GOLD** [aquamix.com.au](http://aquamix.com.au).

## Care and Maintenance

Following final sealing ensure the correct maintenance regime is immediately implemented and adhered to and a copy of the latest Fibonacci Stone Care and Maintenance Guide is passed onto the Client. Fibonacci Stone partners with leading companies specialising in a range of products and services and we are always seeking to provide our customers with high quality information and company referrals to assist with your on-going care and maintenance of your Fibonacci Stone tiles.

For care and maintenance products and services we recommend the following leading industry specialists:

### AQUAMIX

(02) 9620 5189  
[info@aquamix.com.au](mailto:info@aquamix.com.au)  
[aquamix.com.au](http://aquamix.com.au)

## Domestic Care

### Routine Daily Cleaning and Maintenance

- Clean spills ASAP.
- Remove large grit particles that may scratch the surface using a suitable static mop, broom or other depending on the surface finish of the terrazzo tile.
- Clean floor with a PH Neutral Detergent using a steam mop fitted with a microfibre pad.
- Do not use products that contain acid or alkaline.

### Annual Cleaning and Maintenance – Recommended

- Remove large grit particles that may scratch the surface using a suitable static mop, broom or other depending on the surface finish of the terrazzo tile.
- Clean floor with a PH Neutral Detergent using an auto-scrubber fitted with cleaning pad/brush suitable for the surface finish of the tiles.
- Clean edges and hard to reach places using a mini-scrubber fitted with a cleaning pad/brush suitable for the surface finish of the tiles.
- Clean any excess water using a wet vacuum or mop immediately to avoid dirty water pooling on the surface.
- For honed surfaces buff the floor using a buffing machine fitted with a suitable buffing pad.

## Commercial Care

### Routine Daily Care and Maintenance

- Remove large grit particles that may scratch the surface using a suitable static mop, broom or other depending on the surface finish of the terrazzo tile.
- Clean floor with a PH Neutral Detergent using an auto-scrubber fitted with cleaning pad/brush suitable for the surface finish of the tiles.
- Clean edges and hard to reach places using a mini-scrubber fitted with a cleaning pad/brush suitable for the surface finish of the tiles.
- Clean any excess water using a wet vacuum or mop immediately to avoid dirty water pooling on the surface.
- For honed surfaces buff the floor using a buffing machine fitted with a suitable buffing pad.

### Cleaning Products and Services

Fibonacci Stone partners with leading companies specialising in a range of products and services and we are always seeking to provide our customers with high quality information and company referrals to assist with your on-going care and maintenance of your Fibonacci Stone tiles. For care and maintenance products and services we recommend the following leading industry specialists:

### AQUAMIX

(02) 9620 5189  
[info@aquamix.com.au](mailto:info@aquamix.com.au)  
[www.aquamix.com.au](http://www.aquamix.com.au)

---

# Contact

Fibonacci Stone

1300 342 662

[info@fibonaccistone.com.au](mailto:info@fibonaccistone.com.au)

[fibonaccistone.com.au](http://fibonaccistone.com.au)

---

The technical details, products and methods contained in this guide are to the best of our knowledge and experience, all the above must in every case be taken as indicative and anyone using the information must ensure beforehand that it is suitable for the application. Failure to install and finish Fibonacci stone tiles in accordance with building code requirements and good installation and finishing practices may affect system performance and void product warranty. This information is subject to change without notice – always request latest version from Fibonacci Stone. **1300 342 662**  
Email: [info@fibonaccistone.com.au](mailto:info@fibonaccistone.com.au).

**FIBONACCI  
STONE**