

**Tile**

**Installer Guide**

**FIBONACCI**

# Contents

<b>About This Guide</b>	<b>3</b>
<b>About The Product</b>	<b>4</b>
Tile Composition and Appearance	4
Slip Resistance	4
Storage & Handling	4
Receiving Your Tiles	4
Storage	4
<b>Prior To Installation</b>	<b>6</b>
Site Assessment	6
Substrate Adequacy	6
Set-Down	6
Setting Out	6
<b>Fixing Materials</b>	<b>7</b>
Primers	7
Adhesives	7
Grouting Materials	7
Silicone Sealants for Caulking	7
Sealers	7
<b>Laying The Tiles</b>	<b>8</b>
Sorting Your Tiles	8
Substrate Surface Preparation	8
Laying	9
Cutting and Profiling	9
Finished Surface	9
Grouting	9
<b>Finishing</b>	<b>10</b>
During and Following Installation	10
Sealing	10
<b>Care &amp; Maintenance</b>	<b>11</b>
Domestic	11
Routine Daily	11
Extended Life	11
Commercial	11
Routine Daily	11

# About This Guide

This Guide is intended to share with our customers our knowledge and experience associated with our products and the use of our products. It contains recommendations and technical information to help you when fabricating and installing our slabs.

It is not meant to replace the skills or experience of a qualified stonemason. The processes and recommendations in this Guide should be considered as a guide only.

The installation process of our tiles is carried out by independent installers. Please keep in mind that the exact procedures used will vary between installers and the installer will make the best choice of installation methods to suit the application to which these tiles will be used.

Methods of installation are to be in accordance with the latest relevant standards and/or 'best practice' industry standard. Information provided in this document must be read and interpreted in conjunction with relevant industry codes and standards.

If there are conflicting recommendations in this guide to that specified in a code or standard please contact Fibonacci for further clarification and support.

We cannot and do not dictate how a qualified installer can use our tiles, although following our recommendations will help to minimise problems before and after installation.

This Guide is not intended:

- 1) To be used for any other purpose, nor is it legally binding in any way. It is not meant for dispute resolution between Fibonacci, stonemason or any other party.
- 2) For use by unqualified or unskilled workers.

It assumes that the reader is a suitably skilled professional as this Guide does not cover the basic skills and knowledge that a stonemason should possess.

Always refer to the latest guide and contact us for support.

# About The Product

## 1) Tile Composition and Appearance

Tiles are made up of natural stone and cement and the variance in these raw materials is noticeable in the finished product and is a feature of the tile design.

The texture of the honed finish is a balanced combination of low surface porosity and texture designed to endure wearability which over time, the surface will patina, responding to the application environment.

It's the perfect imperfections in each Fibonacci tile that makes each tile unique even though they will share the same common structure, colour and overall look. They are not identical, however work harmoniously within the application that they will be used for. Batching is used to identify tiles from the same batch.

Our tiles are manufactured using specialised techniques to achieve a completely homogeneous, consistent high density and low porosity material consisting of approximately 75% natural stone bonded with the highest quality Portland cement and pigment oxides. Fibonacci tiles are produced, finished calibrated and squared. Tiles can be cut and profiled to create edging as required.

## 2) Slip Resistance

All Fibonacci products are produced standard in a Honed finish which is suitable for most internal domestic and commercial areas. All products are tested to AS 4586-2013 and Slip Resistance Test Reports are available upon request.

For higher slip ratings we recommend the Slip Stop Anti-Slip treatment which is carried out at the same time as sealing the tiles and in our experience it is near cost neutral when compared to a good quality clean and seal. You can achieve up to a P5 rating and vary this according to your needs with the difference in appearance being less noticeable than the other methods.

This is not a coating, but a treatment and comes with a 5 year warranty and slip test certificate. For more information visit [slipstop.com.au](https://slipstop.com.au)

# Handling, Transport and Storage

## 1) Receiving Your Tiles

It is important to inspect the tiles thoroughly when received and/or prior to installation.

Check the delivery for noticeable signs of damage to crates that may have occurred during transportation and immediately advise both the delivery driver and Fibonacci.

Unpack tiles with care prior to installation and inspect the tiles for any quality defects. Tiles are made up of natural stone and cement and the variance in these raw materials is noticeable in the finished product and is a feature of the tile design. Minor marks, chipping and small pinholes may appear in the tile are not considered defects.

Tiles with excessive chipping or damage should first be used for cuts. As a guide, approximately 20% of the order quantity will be used for cuts. Please notify us immediately if the number of tiles exceeds this quantity.

## 2) Storage

- 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.

# Prior To Installation

All installations have unique requirements and circumstances associated with them. A successful, long lasting installation requires accurate planning and coordination, careful and responsible installation, protection and appropriate care and maintenance.

## 1) Site Assessment

Inspect the site and consult with the head contractor/ structural engineer to obtain confirmation of the expected movement of the building and the substrate and to identify any site specific considerations.

## 2) Substrate Adequacy

Tiles can be installed on a reinforced concrete slab or a timber framed substrate (floor/wall) that is constructed in accordance with the relevant industry standards. Check for cracking or signs of obvious movement that may affect the new tiling system performance and rectify, treat/reinforce as necessary. Timber framed substrates to be sheeted with an appropriate material to suit (typically FC sheet or similar).

Excess moisture, shrinkage, deflection, movement, impurities may cause delamination, reduce bond strength and/or cracking in the tiled surface.

## 3) Set-Down

Requirements can vary due to site conditions as well as tile thickness, adhesive bed and the thickness of the screed or levelling material (when required). The typical set-down requirement can be formulated by calculating the – Tile thickness + Adhesive bed + Levelling Compound/Screed.

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 typical installations we recommend a minimum 20mm thick screed.

## 4) Setting Out

Setting your installation should be related to the tile pattern and siting of movement joints intended to perform the following functions:

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

Movement and expansion joints are to be installed in accordance with the relevant standard and as detailed on working drawings by the engineer and should be strictly adhered to.

Intermediate movement joints are to be inserted at evenly spaced positions at approximately 4.5m centres or at locations where stress might reasonably be expected in:

- a) internal floors where any dimension exceeds 9m or 6m if subjected to sunlight (clause 5.4.5.2 (b) (i) of AS 3958.1).
- b) external floors where any dimension exceeds 4.5m (clause 5.4.5.2(b)(ii) of AS 3958.1).

We recommend **LATHAM Proprietary Joints**.

Grout Joint width of your installation is recommended to be in accordance with Australian Standards as follows:

Internal	External
Floors (3mm)	Floors (3-5mm)
Walls (2mm)	Walls (2-3mm)

# Fixing Materials

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.

## 1) 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.**

## 2) Adhesives

The right choice of adhesive is essential for correct installation. For typical installations we recommend the two-component rapidsetting hydrating cementitious adhesive: **Mapei Granirapid.**

## 3) Grouting Materials

Selecting the appropriate grout is directly related to the required or expected performance of the completed floor system. Proprietary high performance cementitious grouts certified by the manufacturer to relevant industry standards are appropriate. For typical installations we recommend:

**Mapei Ultracolour Plus.**

## 4) Silicone Sealants for Caulking

Use only neutral-curing silicone sealants that do not cause any migratory staining on natural stone and match sealant colours to grout colour. For typical installations we recommend: Maxisil 'N' Natural Stone Silicone

**Natural Stone Silicone.**

## 5) Sealers

Following installation, it is recommended that a reputable sealing contractor carry out all cleaning and sealing applications and the recommended Care & Maintenance regime is implemented. For typical installations we recommend: **Aquamix Sealers Choice Gold.**

# Laying Tiles

The installation process of our tiles is carried out by independent installers. Please keep in mind that the exact procedures used will vary between installers and the installer will make the best choice of installation methods to suit the application to which these tiles will be used.

When installing Fibonacci products, methods of installation are to be in accordance with the relevant standards and/ or 'best practice' industry standard.

## 1) Sorting the Tiles

Prior to installation open all crates and unpack the tiles with care and separating them so they can be installed using a blending system which incorporates the varying nature of the tiles for a more harmonious aesthetic outcome.

Inspect the tiles for any quality defects and grade the tiles separating any tiles with excessive chipping or damage which can be used for cuts. Minor marks, chipping and small pinholes may appear in the tile are not considered defects. As a guide, approximately 20% of the order quantity will be used for cuts. Please notify us immediately if the number of tiles exceeds this quantity.

## 2) 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 maximum 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.

## 3) Laying

Select tiles for laying using a blending system. Back butter the tiles by applying a thin coat of adhesive to the entire back of the tile and then laying onto the adhesive bed to achieve 100% coverage of the tile for maximum bond.



# Laying Tiles

## 4) Cutting and Profiling

Cut tiles using a wet-saw with a continuous diamond blade suitable for marble, general cutting or mitred edges. Completely homogenous, edges can be profiled or polished as required for your installation.

Tiles are porous and water will be introduced into the material when cutting. Only install when the material is dry which can be achieved by leaving cut pieces in open air/sunlight or by using a heat gun.

## 5) 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. Finished tolerances as follows:

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

## 6) Grouting

Terrazzo Tiles are porous and extra care should be taken when grouting. Prepare a sample grout for colour approval from Designer/Client. For typical installations we recommend **Mapei Ultracolour Plus**.

- Allow for the adhesive to cure before grouting as recommended by the adhesive 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).

The top surface of the grout may be tooled to provide a contoured depression of no deeper than 1mm.

# Finishing

Fibonacci 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 tiles. For care and maintenance products and services we recommend leading industry specialist [Aquamix](#).

## 1) 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, caulking and grout residue using a suitable scraper.
- 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.

## 2) Sealing

Following installation, it is recommended that a reputable sealing contractor carry out all cleaning and sealing applications and the recommended Care & Maintenance regime is implemented. For typical installations we recommend: [Aquamix Sealers Choice Gold](#).

# Care and Maintenance

## Domestic

### 1) Routine Daily

- 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.

### 2) Extended Life

Over time, tiles can show signs of wear and tear and can be rejuvenated.

For best results we recommend a reputable sealing contractor mechanically clean the tiles, removing stubborn stains and repairing any scratches or blemishes in the tiles.

## Commercial

### 1) Routine Daily

- 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.