

NEW TERRACOTTA

TERRAZZO TILES

Technical Guide

2nd Edition 2020

Please note these tips are guides only and should be used in addition to the relevant industry standards for terrazzo. Note that installation may vary from site to site with varying conditions experienced on site. The contractor and specifier should decide if these suggestions are suitable for their application or require further adjustment.

? TILE UNDERSTANDING

Colour Variation

Terrazzo is a natural product, although quality control ensures a high level of colour consistency, slight colour variations can still occur.

Structure Variation

Terrazzo may show signs of natural veining or surface fractures. The veins and surface fractures in no way affect the integrity of the material and should be interpreted as a natural characteristic that makes it unique.

Surface Finishing

The surface finishing brings out the aesthetic features and determines to a large extent the final look of the terrazzo and its intended use. Different finishes will provide different slip resistance, chemical resistance and other external factors that can affect its functionality and durability.

NWT Terrazzo can be supplied in polished, honed, brushed or bush-hammered finishes.



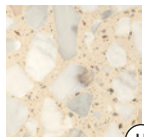
(P)

■ POLISHED

This technique produces a shiny surface, with almost zero porosity, while improving resistance.

Polished finish highlights the colour, pattern and properties of the natural terrazzo.

It is commonly used as interior wall and floor dressing, as well as in kitchen countertops. It is not recommended for outdoor paving, since it reduces slip resistance.

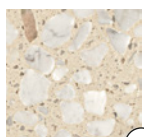


(H)

■ HONED

This technique produces a smooth matt or slightly reflective surface, recommended for high traffic areas.

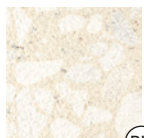
Unlike a highly polished finish, honed offers the beauty of terrazzo with a less slippery, though smooth, glowing surface. The look itself is also more subtle. Whereas a polished surface is high-end and chic, a honed surface is low-key and elegant for organic yet classic design schemes. In wet areas such as bathrooms where there is a risk of slipping, a honed finish is a better option than a polished one.



(B)

■ BRUSHED

A brushed finish gives terrazzo a slightly textured feel. It is not usually rough to the touch but rather a finish of smooth and silky ridges and veins. Unlike polished or honed, a brushed finish typically has no sheen to it. Like a honed finish, a brushed finish dilutes the colour of the terrazzo. This finish is suited for outdoor use, as the texture will provide a bit of traction for application around surfaces that will be wet or exposed to the elements. Similarly, such a surface will hide scratches and imperfections, which are bound to happen on a terrazzo surface that is exposed to scratchy outdoor elements like dirt and lawn debris.



(BH)

■ BUSH HAMMERED

A bush hammered finish gives terrazzo a sculpted evenly textured surface, and hence particularly suitable for outdoor use.

The small indentations on the surface are obtained using a hammer fitted with multiple heads composed of projecting pyramidal teeth.

! TILE PREPARATION

Meticulously plan your layout. The time you take for preparation and placement will greatly impact the finished result.

- Prior to the installation allow tiles to season in their final environment.
- Pre-sort your tiles so you can distribute the range of variation throughout the installation.
- Blending is recommended.
- Inspect each tile deformities that make its use inappropriate for the application intended.
- The tiles can be cut using a diamond-blade (ideally a water-cooled machine).

TILE LAYING

Proper substrate preparation and the right choice of adhesives and grouts for the terrazzo tile and specific project conditions are critical for achieving a long-lasting installation.

Laying General Methods:

1. Prepare the surface. Terrazzo tiles must be installed on a well levelled, clean and dry surface. Humid subsoil will cause fur deposits on the tile's surface.

2. Determine the layout and mark the surface. For aesthetic and technical optimisation, define starting points and cuttings.

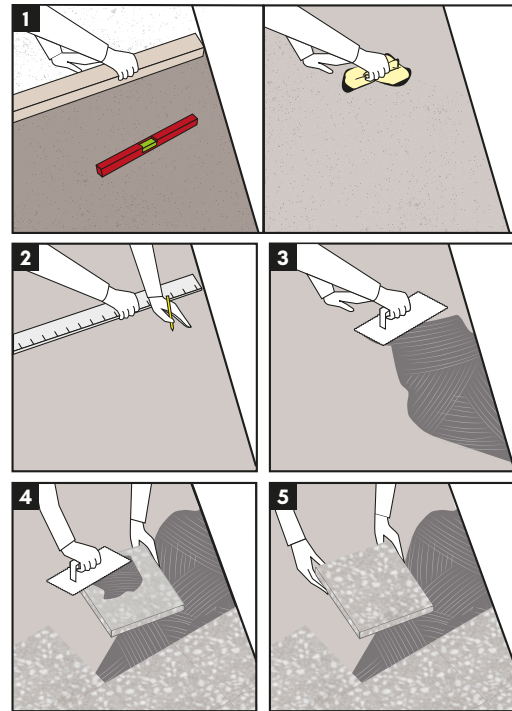
3. Apply the proper fast-setting and hydrating tile adhesive. Use a large-toothed trowel to spread the adhesive.

4. Back butter tiles. Apply adhesive on the back of the tile using a large-toothed trowel.

5. Install the tiles. Lay the tiles and press into place using your hands leaving a thin gap (2 mm) for the joint.

The tile size and the thermal expansion coefficient could determine a larger joint, especially outdoors.

Ensure tiles are completely level throughout the installation, as unevenness cannot be rectified later.



TILE SURFACE PREPARATION BEFORE SEALING AND GROUTING

During the laying use the utmost caution, in order to prevent the staining of the tiles.

Once the adhesive dry, clean the surface by removing dry dirt using a cloth and wash with a neutral detergent diluted with water. Rinse thoroughly with clean water and leave to dry.

We strongly advise against the use of alkaline detergents and strong solvents.

Tiles should then be allowed to set for 72 hours before applying sealant and grout.

TILE SEALING BEFORE GROUTING

An impregnating sealing is an essential step in protecting the beauty and ensuring the longevity of terrazzo tiles, as it accentuates the appearance and helps to protect against fading and staining.

The sealant is a solvent based liquid that limits water and oil penetration. It impregnates the tile, protects it and keeps its natural matt aspect.

Apply with a brush or a roller on a dry and clean surface. This should be applied in successive applications until the tile is fully saturated. Saturation has been achieved when an even layer of sealant is still visible on the surface after 30 minutes.

Do not apply too much. The excess would leave glistening stains on the surface (brush traces).

Always try the sealer on a loose tile before applying it on the entire surface in order to measure the grade of absorption of the tiles.

TILE GROUTING

It is recommended to use a flexible cementitious grout compound suitable for the application of terrazzo tiles. Do not use contrasting grouts and completely cover the entire surface of the tile with grout to avoid “framing” and ensure all grout residue is cleaned using proper grout cleaners.

Grouting General Methods:

1. Seal the tiles. Always ensure that surfaces are properly sealed before grouting.

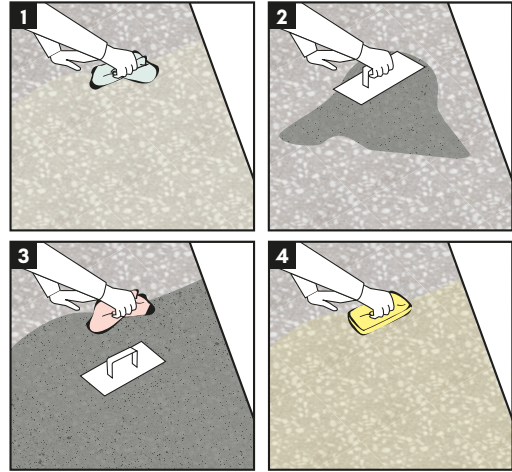
In order to prevent the soiling or staining a proper sealant must be applied.

2. Grout the entire surface of the tile.

3. Remove excess. Clean the excess grout immediately, using a damp cloth. Do not use chemical cleaners.

4. Clean the floor. Remove any cement residue stains immediately, using a pH neutral cleaner.

Never use cement remover, strong detergents or bleach as these will damage the tiles. Stains or spots can be delicately removed with a scouring pad or fine-grained sandpaper.



FINISHING AFTER GROUTING

The finishing completes the protection against wear and dirt.

Always apply a final coat of impregnating sealant making sure to cover the grout joints as well.

Further to the above you can also apply a surface wax. This will offer extra protection and give an attractive patina.

For larger surfaces or high traffic floor (airports, schools and other public spaces), a special protection and attention on a daily maintenance is recommended. Using a high speed polishing machine and a red polishing pad may accelerate the process and protect the entire floor evenly.

MAINTENANCE

Keep the surface as free as possible of loose dust and grit with regular vacuuming or sweeping. This will reduce the sandpaper effect of dirt getting compacted into the surface and joints.



Wash the floor using a pH neutral cleaner, ideally biodegradable and environment friendly, to remove the dirt that a vacuum won't pick up, and secondly for hygiene purposes.

We strongly recommend avoiding the use of bleach- based cleaners, washing-up liquids or any other acid cleaners.

Never use metallic brushes or wire wool pads as these will damage the floor surface.

The right choice of materials and installation methods is essential to the success of your installation. Some adhesives carry a warning that they may react adversely with certain types of tiles. New Terracotta recommends the using of MAPEI fixing materials and suggests contractors contact a MAPEI specialist for more information about their products.


For typical installations please consider:

PRODUCT	USE	ADHESIVE	GROUT
 TERRAZZO TILES (smaller than 60x60 cm)	Interior Floors + Walls Interior Wet Areas Exterior Floors + Walls	MAPEI Keraquick S1	MAPEI Ultracolor Plus
 TERRAZZO TILES (bigger than 60x60 cm)	Interior Floors + Walls Interior Wet Areas Exterior Floors + Walls	MAPEI Elastorapid	MAPEI Ultracolor Plus

TREATMENT ANCILLARY PRODUCT

The finest New Terracotta surfaces can be kept at their beautiful best if protected carefully. New Terracotta recommends the using of FILA products and suggests clients contact a cleaning specialist for a professional consultancy.

For typical treatments please consider:

PRODUCT	USE	PROTECTOR	FINISHER
 TERRAZZO TILES	Interior Floors + Walls	FILA MP90 Eco Plus coverage 30 m ² per liter	FILA Matt / FILA Satin coverage 20 m ² per liter
	Interior Wet Areas		N/A
	Exterior Floors + Walls		N/A

The New Terracotta technical support team is available to assist you in determining the best practice for your installation. For more information contact us.

Technical Features	Standards	Test Results	Compliance
 Determination of water absorption	EN 13748-1	$M-\% < 5$	YES
 Determination of flexural strength	EN 14617-2	$N/mm^2 > 8$	YES
 Determination of resistance to compression	EN 14617-15	$N/mm^2 > 70$	YES
 Determination of resistance to abrasion	EN 13748-1	$\emptyset < 20 \text{ cm}^3 / 50 \text{ cm}^3$	YES
 Determination of slip resistance	EN 13748-1	$> 8^\circ$	YES
 Determination of frost resistance	DIN-52104	Class 2/B - 3/D Frost Resistant	YES
 Determination of fire resistance	EN 13748-1	Class A1 _{fl} Fire Resistant	YES

NWT Terrazzo Tiles, Cement Portland Calss 1 (Binder) ; Marble (Aggregate)
 Test report, TÜV Rheinland LGA Products GmbH, Nuremberg.

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