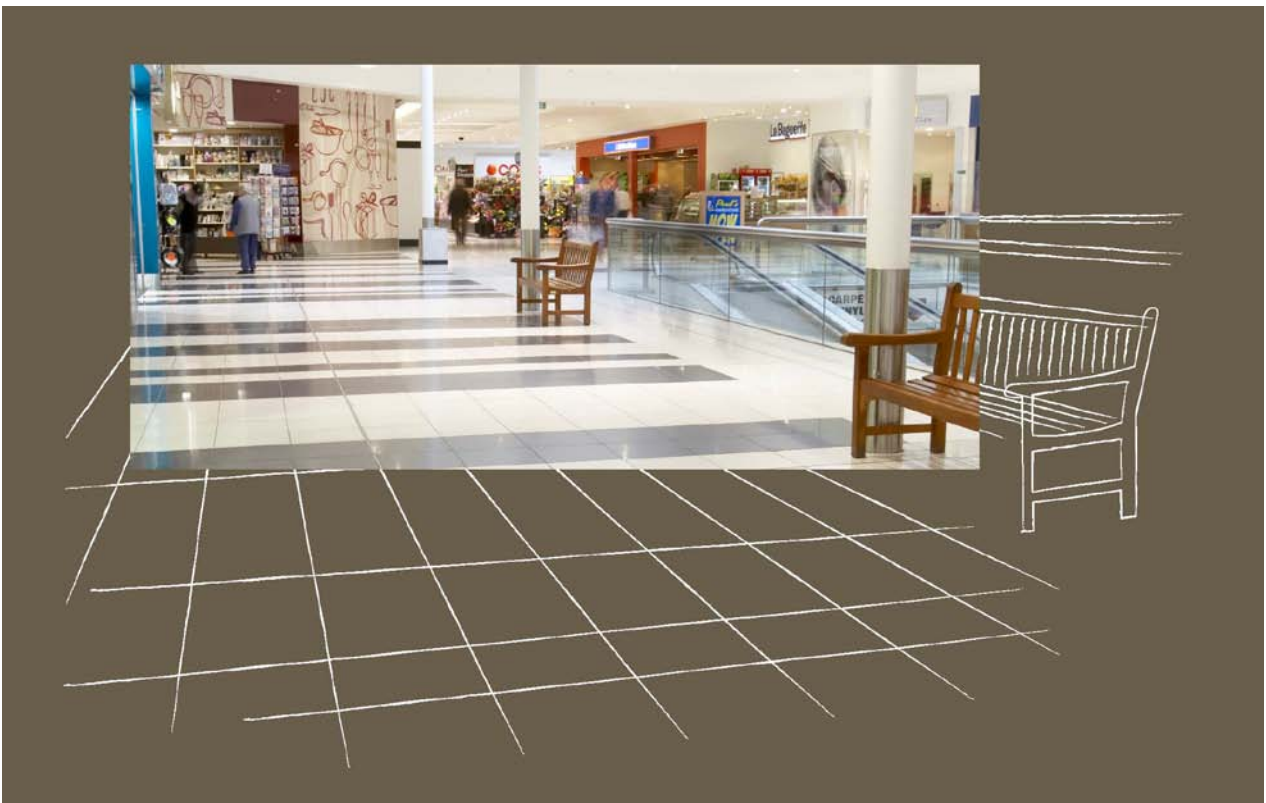


terastoneTERRAZZO

DESIGNER FLOORING



Installation, Finishing & Care Manual

Product Description

Terastone Terrazzo is thin monolayer tile of composite stone manufactured using specialized techniques & strict specifications in one of the most advanced Breton manufacturing plants available. Natural stone granules are compacted by vibration under vacuum & bonded using inorganic binders.

Both Breton & the manufacturing plant follow the strict principles of the ISO14001:2004 Environmental Management guidelines.

Terastone is free from organic additives & is completely recyclable which makes Terastone perfect for **GREEN** projects. Terastone has favourable thermal properties & when used in environmentally sustainable design & active cooling/heating systems can reduce energy ratings significantly.

Terastone is available in **15** selected colours offering a wide variety of colours, natural aggregates, & design allowing the designer a choice of combinations.

Marble, quartz & granite aggregates sourced from natural deposits from around the globe are mixed with cement, water & powder form inorganic pigments & fillers.

Terastone tiles are an ideal solution for any application requirement in building and decorating including shopping malls, clubs, airports, railway stations, schools, hospitals, pavements, commercial & domestic, internal & external. Terastone tiles are perfectly homogenous and possess outstanding physical-mechanical and chemical properties in their entire mass.

Due to the high technical characteristics & by following a routine maintenance regime, Terastone tiles are enduring over time.

Test Results

Technical Characteristics

PROPERTIES	UNIT	RESULTS	TEST METHOD
Compressive Strength	mPa	Dry 159.2	ASTM C170:1990
Compressive Strength	mPa	Wet 175.2	ASTM C170:1990
Water Absorption	%	1.61	CSIRO BEST 2:1998
Apparent Porosity	%	4.04	CSIRO BEST 2:1998
Bulk Density	gms/cm ³	2.51	CSIRO BEST 2:1998
Modulus of Rupture	N/mm ²	17.0	1634/VLXD-PTKN
Abrasion Resistance	G/cm ²	0.15	1634/VLXD-PTKN
Impact Resistance	Time	> 30	TCVN 6065-1995
Thermal	Shock Resistance	OK	TCVN 6415:1998
Acid Resistance	Type	AA	
Scratch Hardness to Surface	Mohs	6-7	EN 101 TCVN 6415:1998
Glossy	%	33	ISO 2813
Coefficient of Thermal Expansion	10 ⁻⁶ x C ⁻¹	8.51	EN 103 TCVN 6145:1998
Slip Test Rating Wet Pendulum	BPN	Y	AS/NZS 4586:2004

Referral to Handbook 197:1999 An introduction Guide to the Slip Resistance of Pedestrian Surface Materials must be made to interpret slip classifications. The handbook recommends minimum classification required for a wide variety of locations.

NB. Slip results reported are obtained using unused clean factory samples & may not be directly applicable in location where, contamination, general wear & tear, cleaning & proprietary surface coatings can influence the behaviour of the surface.

Typical Installation Tips

As a general rule the following should be used as a guide for typical floor system installations on reinforced/solid concrete substrate & all final recommendations for specific installations should be confirmed with the adhesive product manufacturer/supplier & follow good tile laying practice, relevant standards, building codes & Engineer's specifications.

Storage

Consignment should be handled with care & inspected carefully.

Do not store outdoors.

Do not store tiles where they are subjected to direct sunlight, high temperatures or moisture & protect from rain. Tiles should be acclimatised to the ambient conditions of the installation location. The crates should be stored stacked no more than two high & allow room for air circulation. This should take 3-7 days.

Climate Conditions & Considerations

Installation of Terastone Terrazzo tiles requires the following precautions

Do not install during very hot temperatures

Do not install during hot windy conditions which are expected during laying & bonding process.

Do not install when rain is predicted during installation, bonding process or directly after laying.

Substrate & screed must be cured & maintained to 5.5% moisture content or lower.

Where installation under extreme conditions is unavoidable, follow typical conditions & in addition-

Unpack tiles & allow acclimatisation to final environment.

Cover tiles to maintain a consistent temperature during bonding process.

Substrate Preparation

- The substrate must be clean and free from impurities and debris.
- Concrete slab substrate must be cured to a minimum of 5.5% moisture content. (Damp substrates may cause delamination)
- Substrate must be prepared with suitable primer (Mapei Primer G for example) and/or ensure the correct waterproofing membranes are installed where water can penetrate the tile. We recommend using a reputable, professional waterproofing contractor for recommendations of waterproof installations.
- Primed &/or waterproofed surface must be protected, free of impurities, dust, debris, before beginning the installation of tiles.

Screeds Over Substrates

Screeds are required to level the surface for installation.

- Ensure the screed bonds with the substrate by preparing substrate as follows.
- Substrate must be cured to a moisture content of 5.5% or lower. Screeds over damp substrates will dry at a slower rate & delay installation.

- Screeds must also be cured to a moisture content 5.5% or lower. Damp screeds may cause delamination. Allow sufficient time (4days per cm of thickness) for the screed to cure, carrying out a moisture reading to confirm at all times
- Ensure the screed is clean and free from impurities and debris.
- Screed must be prepared with suitable primer (Mapei Primer G for example) and/or ensure the correct waterproofing membranes are installed where water can penetrate the tile. We recommend using a reputable, professional waterproofing contractor for recommendations of waterproof installations.
- Primed &/or waterproofed surface must be protected, free of impurities, dust, debris, before beginning the installation of tiles.

Adhesives

For **typical internal** installations you may consider using a high performance rapid-setting and hydrating cementitious two-component adhesive such as **Mapei Granirapid** or your Mapei specialist's recommendations.

For external installations refer to climate conditions & considerations

Mapei Granirapid is suitable for internal & external installations.

- Mix the required amount of Mapei **Granirapid White or Grey** powder/ liquid and mix in accordance with the manufacturer's recommendations with a mechanical stirrer.
- Apply with a notched trowel to the areas to be tiled, not exceeding 1 m² at a time and bed down tiles with firm pressure, ensuring 100% coverage. Periodically lift a tile to ensure correct coverage.
- Install tiles using a 12mm notch trowel and always back-butter the entire back of the tile to ensure maximum coverage and bond to the substrate.
- Be sure to immediately remove any excess adhesive from the surface of the tile before the adhesive cures.
- Allow 3-4 hours curing time before grouting and 24 hours for traffic.

Grouting

Terastone Terrazzo tiles should be installed with minimum 3mm grout joints. The joints between tiles are essential to absorb differential movement in the substrate/adhesive system.

It is recommended to lay Terastone Terrazzo tiles with a minimum 3mm wide grouting joint, you may consider using a product such as Mapei Ultracolor Plus.

- Terastone Terrazzo tiles are porous and extra care should be taken when grouting. We recommend appropriate pre-treatment be applied to Terastone Terrazzo using a reputable penetrating sealer prior to grouting.
- Tiles must be completely dry prior to sealing & grouting....see Slip Stop example on pages 7 & 8
- Ultracolor Plus once applied to joints, needs to be treated as a normal tile grouting product that imparts fast setting and curing characteristics that work in tandem with the rapid setting and curing Granirapid adhesive system.
- Avoid dark or contrasting grout colours.
- Joints must be cleaned of any excess adhesive or debris.
- Ensure grout joints are filled completely.
- Completely cover the tile with grout to avoid "framing" & completely remove all excess grout.
- We recommend not to allow grout smear residue to set/cure onto the surface of the TerastoneTerrazzo tile as once set/cured, removal can only be via mechanical & professional means.

Joints

Terastone Terrazzo tiles should be installed with minimum 3mm grout joints. The joints between tiles are essential to absorb differential movement in the substrate/adhesive system.

- Structural expansion joints
- Intermediate movement joints
- Silicon joints.

Expansion Joints

Expansion joint installation should follow AS3958.1-2007 Ceramic Tiles-Guide to the installation of Ceramic Tiles.

AS3958.1-2007 Section 5.4.5 Movement joints.

Structural movement joints - installed as per Clause 5.4.5.2 paragraph (a)

Intermediate movement joints - installed as per Clause 5.4.5.2 paragraph (b)

Any other interpretations require consultation with Architects or Engineers.

NB. Post tension concrete slab substrates require further consultation with Architects & Engineers.

In Summary

Structural movement joints must be carried through from substrate into bed & Terastone Terrazzo.

Intermediate movement joints should be inserted at 4.5m centres (Internally) in accordance with clause 5.4.5.2

Intermediate movement joints should be inserted at 3.0m centres (Externally) in accordance with clause 5.4.5.2

Intermediate expansion joints are recommended to be 12mm wide metal sided neoprene infill type.

Install tiles approximately 10mm away from walls, columns, edges and corners.

Protection of Work

- Precautions must be taken to protect the finished work from damage by other trades.
- All traffic (pedestrian or mechanical) is not allowed during curing of fresh installations.
- Grout joints require 7 days curing time prior to any steam or aggressive cleaning. Reminder all excessive grout smear must be removed from surface of tiles prior to setting/curing.

Note: Low temperatures retard the curing of tile installation mortars, adhesives & grouts and finished sections of work should be protected accordingly.

Health and Safety

Personal Protection-Use of rubber gloves, ear muffs, suitable dust masks, safety glasses and industrial clothing is highly recommended.

Discard opened packaging, product wash, waste water as per local, state or federal regulations, and/or place in appropriate recycle bins.

Care & Maintenance

Terastone Terrazzo tiles begin to dry in their packaging & prior to laying. This occasionally causes a “picture frame” effect, which means the edges of the tiles are lighter in colour; this effect becomes uniform over the entire surface under good climatic conditions. Sealers must not be applied until the colour is uniform.

After installation of Terastone Terrazzo tiles follow routing Cleaning procedures & Slip Stop Maintenance examples.

Routine Cleaning

- To avoid scratching, grit particles must be removed by sweeping on regular basis daily.
- Spills to be mopped up immediately; if necessary spot clean with ph neutral cleaner with non abrasive pad.
- Daily clean using a mop with hot water and a reputable ph neutral detergent.
- **Use PH Neutral Products ONLY.**

Stains

A reputable ph neutral detergent and routing cleaning (wiping/scrubbing) should remove most stains. Our Tech Support Team can be contacted for stains proving to be difficult to remove.

Technical Support

For troubleshooting please contact our technical support team via email at technical@wk.com.au

Disclaimer: The following information is not a substitute for good installation/finishing/maintenance practice nor is it an exhaustive description of, or a substitute for applicable building codes & standards. Warranty will be void if relevant Building codes requirements & good practice codes are not followed during installation. Failure to follow these codes could affect system performance. For certain types of installations, Australian Standards, specific Building codes or special installation procedures may need to be followed. This manual is intended as a guide only & does not insist on this as being the only method of installation. In the interest of development & safety, this manual is subject to change without notice-always refer to the latest edition-October 2011.

www.wk.com.au/tiles/terastone



CLEANING GUIDELINES - S055 - TERASTONE SEALED

TO KEEP YOUR FLOORS IN GOOD CONDITION IT IS ESSENTIAL THAT THEY ARE CLEANED THOROUGHLY, OBSERVING THE FOLLOWING:

- 1** CLEAN YOUR FLOOR WITH QUALITY, SLIPSTOP LIQUID CLEANER.
SLIPSTOP - S055 Green Cleaner for best results. Mop On Lightly Daily
NEVER USE A CLEANER THAT LEAVES A FILM ON THE FLOOR.
AVOID CLEANERS CONTAINING SODIUM HYDROXIDE or CLEANERS CONTAINING ALKALINE CONTENT.
MILD ORGANIC CLEANERS PREFERABLE
- 2** RINSE WITH CLEAN MOP & WATER , IMMEDIATELY AFTER USING S055.
- 3** IT IS RECOMMENDED TO GIVE THE FLOOR A THOROUGH SCRUB WITH A DECK BRUSH OR A SCRUBBING MACHINE Daily in high traffic areas
- 4** IF YOU USE A MECHANICAL SCRUBBER, USE ONLY WITH A BRUSH ATTACHMENT. Occasionally Whites
DO NOT USE AN ABRASIVE PAD.
- 5** **DO NOT USE A POWDERED DETERGENT** - AS IT LEAVES A CALCITE FILM ON THE SURFACE.
- 6** **DO NOT POLISH OR SEAL SLIPSTOP SEALED FLOORS** - AS THIS WILL NEGATE THE TREATMENT.

Directions for Use:

Dilute S055 with Hot water at a ratio of 1:50 (one part S055 to 50 parts hot water)

Using a mop, generously apply the mixture to the sealed area.

Thoroughly scrub the floor using a deck brush or equivalent (mechanical scrubber for best result) as required

Vacuum or mop up with clean mop & water only.

IT IS RECOMMENDED TO USE THE FOLLOWING CLEANERS:

SLIPSTOP Cleaner S055 - special cleaner for the maintenance of Marble, Terrazzo, PVC & Linoleum floors. Dilute in **HOT WATER** 1:50

SLIPSTOP Cleaner S085 - for the removal of fat & grease. Dilute in **HOT WATER** 1:50

AS THE WORLD'S LEADING SPECIALIST IN TILED FLOOR SAFETY, SLIPSTOP CAN PROVIDE A COMPREHENSIVE RANGE OF CLEANERS. FOR FURTHER ADVICE OR INFORMATION PLEASE CONTACT:

SLIPSTOP - Aftersales

Unit 5, 5 Clerke Place
Kurnell NSW 2231

T. (02) 9668 8389 F. (02) 9668 8206

E. sales@slipstop.com.au

W. www.slipstop.com.au



APPLICATION PROCEDURES - SEALING TREATMENT - TERASTONE

SOLUTIONS TO BE USED ARE SLIPSTOP S155

- 1** Preparation. FILL BUCKET WITH **HOT WATER** AND ADD S085 SOLUTION AT A RATIO OF 35:1. DO NOT MIX MOPS
- 2** Preparation. FILL BUCKET WITH **HOT WATER** AND ADD S055 SOLUTION AT A RATIO OF 35:1. DO NOT MIX MOPS
- 3** Preparation. COVER **ALL SURROUNDING AREAS** THAT ARE **NOT** TO BE SEALED
- 4** Application. APPLY S085 TO **ENTIRE AREA**.
- 5** Preparation. **SCRUBBING MACHINE:**
MAKE SURE THAT PROPER SCRUBBING PAD HAS BEEN ATTACHED TO SUFFICIENTLY CLEAN THE FLOOR.
- 6** Preparation. PERFORM WET-VAC TO **ENTIRE AREA**.
- 7** Application. APPLY (S055 - MAINTENANCE CLEANER) OR (S055 - GREEN CLEANER) TO ENTIRE AREA.
- 8** Preparation. USE SCRUBBING MACHINE - AGAIN !
- 9** Preparation. PERFORM WET-VAC AGAIN !
- 10** Application. ONCE FLOOR IS DRY, APPLY GENEROUS COAT OF S155 SEALER
- 11** Application. SPREAD SOLUTION "**VERY LIGHTLY**" & "**EVENLY**" OVER AREA - DO IN SECTIONS IF REQUIRED.
USE A LAMBS WOOL APPLICATOR WITH LONG HANDLE.
ALWAYS MAINTAIN THE SAME DIRECTION OF APPLICATION AS WHEN STARTED.
- 12** Application. APPLY SECOND COAT AS REQUIRED.
- 13** Curing. LEAVE SEALED FLOOR TO **CURE FOR 24 TO 48 HOURS**
- 14.** Application. IF FLOOR NEEDS TO BE USED **PRIOR TO THE 24 HOUR CURING TIME**, ALLOW FLOOR TO DRY FOR 1 HOUR, THEN FOLLOW STEPS 10 - 12. YOU WILL STILL NEED TO COME BACK AFTER 24 HOURS TO SCRUB OFF RESIDUE.
- 15** Application. AFTER THE APPLICATION OF '**SEALING**' SOLUTION TO THE FLOOR - **FOR THE DESIRED PERIOD OF TIME**, YOU WILL THEN NEED TO **CLEAN OFF RESIDUE** WITH S055 AS PER REQUIREMENT.
- 16** Preparation. USE SCRUBBING MACHINE – AGAIN!
- 17** Preparation. WET-VAC ENTIRE AREA AND LEAVE FLOOR 'COMPLETELY DRY'.