

TERRAthin[®] by Royal

1. Product Overview

TERRAthin[®] Terrazzo Tiles by Royal Tiles are factory-manufactured, high performance terrazzo tiles produced using Italian-engineered hermetic pressing systems incorporating vacuum dewatering, wherein excess mix water and entrapped air are actively extracted during pressing, while controlled vibration and high-pressure ensures compact terrazzo matrix. The tiles are engineered using patented technology, resulting in a product that is compact, lightweight, non-porous, highly durable, and easy to install.

TERRAthin[®] tiles are specifically developed to offer architects and designers a superior alternative to: - Insitu terrazzo flooring applications, and - Large-format wet-cast terrazzo slabs (1200 × 600 mm) produced using Molds and vibration-only processes.

2. Manufacturing Technology

- Controlled Batching & Mixing technology.
- Hermetic High-Pressure Technology (Patented Italian origin)
- Vacuum-Assisted Compaction & De – watering.
- Controlled Vibration
- Automated Calibration Systems

This integrated process ensures: - Uniform density throughout the tile - Minimal internal porosity - Tight dimensional tolerances - Excellent surface integrity and edge quality

3. Tile Format & Construction

- Tile Type: Single-layer terrazzo tile
- Nominal Size: 600 × 600 mm
- Thickness: 20 mm
- Construction: Homogeneous, single-layer composition (no backing or laminated layers)

The single-layer construction ensures uniform performance characteristics across the full tile thickness, enabling superior grinding, polishing, and long-term wear resistance.

4. Material Composition

- Binder: White Portland Cement
- Fillers: Selected Marble Powders
- Aggregates: Marble Chips

The formulation is optimized for strength, aesthetics, and long-term durability.

5. Technical Parameters

Parameter	Value	Applicable Standard
Max Dimension of Crushed Aggregate	3–12 mm	NA
Specific Weight	2.5–2.6 kg/dm ³	UNI 10444
Flexural Strength	11.7–12.0 N/mm ²	UNI 6133
Compressive Strength	90–100 N/mm ²	DIN 52105
Abrasion Resistance	430–460 mm ²	UNI 10532
Water Absorption	3.0–4.5 % (by weight)	UNI 10444
Fire Classification	Class 0	DIS11822
Freeze–Thaw	Behaviour Resistant	DIN 52104

5. Surface Finishes & Slip Resistance

TERRAthin[®] Terrazzo Tiles are available in multiple surface finishes. Each finish can be engineered to meet project-specific slip resistance requirements, making the product suitable for: - Commercial interiors - Retail environments - Hospitality spaces - Institutional and high-footfall areas

Slip resistance ratings are provided as per client and code requirements. Terrazzo Tiles are available in multiple surface finishes. Each finish can be engineered to meet project-specific slip resistance requirements, making the product suitable for: - Commercial interiors - Retail environments - Hospitality spaces - Institutional and high-footfall areas

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6. Installation System & Grout Technology

6.1 Calibrated Tile Advantage

- Factory-calibrated thickness ensures perfect plane alignment between adjacent tiles
- Clean, sharp edges allow precise joint control

6.2 Grout & Jointing

- Minimum grout joint width: as low as 0.25 mm
- Joints filled with colour-matched Cement grout systems

6.3 Performance Outcomes

- Seamless visual appearance
- Protection of tile edges
- Floor passes the coin rollover test
- Surface achieves a near monolithic terrazzo appearance without on-site risks

7. Key Advantages of TERRAthin[®] Technology

- Factory-controlled manufacturing environment
- High repeatability across batches
- Consistent chip size distribution
- Excellent colour consistency
- Faster production and delivery timelines
- Ease of installation compared to in-situ terrazzo
- Reduced dependency on on-site skill levels
- Superior edge quality and dimensional accuracy
- Pallet-packed tiles ensuring safe handling and minimal site damage

8. Positioning Statement for Architects

TERRAthin[®] Terrazzo Tiles offer the aesthetic richness of terrazzo with the precision of advanced manufacturing technology. By combining Italian pressing systems with rigorous quality control, **TERRAthin[®]** delivers a product that surpasses traditional in-situ terrazzo and wet-cast slabs in performance, reliability, consistency, and speed of execution.

TERRAthin[®] is the ideal specification choice where design intent demands terrazzo.