

Installation Instructions: Grouted Tile

Mapei Grout System

1) GENERAL

ReadyRazzo® Tiles are intended for indoor use only and must be installed by a professional flooring installer experienced in commercial resilient floorcovering systems. Installers must carry sufficient professional liability (Errors and Omissions) insurance for the project.

Training programs such as INSTALL (International Standards & Training Alliance), CFI (International Certified Floorcovering Installers Association), and Flooring American University are recommended. If this is your first ReadyRazzo® Tiles installation—or if more than one year has passed since successfully installing at least 500 square feet—contact Summit International Flooring at 1-877-496-3566 to review installation requirements prior to proceeding.

These instructions are designed to ensure a successful installation. Any deviation may result in failure. All installation instructions, Safety Data Sheets (SDS), and product label directions must be read, fully understood, and strictly followed. For conditions not covered in this document, contact Summit International Flooring before proceeding.

Unless otherwise noted, follow ASTM F710 – *Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring*. Visit www.astm.org for access to ASTM standards.

The general contractor or owner is responsible for providing a structurally sound subfloor. New concrete slabs must conform to ASTM C33/C33M – *Standard Specification for Concrete Aggregate*. If Alkali Silica Reaction (ASR) is present or suspected, do not proceed—contact Summit International Flooring immediately.

All on- and below-grade concrete subfloors must include a confirmed, effective vapor retarder. The vapor retarder must have a permeance of ≤ 0.1 , a minimum thickness of 10 mils, or meet ASTM E1745 – *Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs*. Verify that it is installed directly beneath the concrete slab and above the granular fill. If this cannot be confirmed, a topical moisture mitigation system meeting ASTM F3010 – *Standard Practice for Two-Component Resin-Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings* must be used, following the manufacturer's written instructions.

Note: These systems typically require a leveling compound to create an absorptive (porous) substrate. Do not use chemical adhesive removers. Do not install in areas subject to hydrostatic pressure. Concrete subfloors must be stable and free from shrinkage, curling, cracking, or movement. Summit International Flooring accepts no liability for failures related to slab movement.

ReadyRazzo® Tiles may be installed over radiant-heated slabs, provided the surface temperature does not exceed 85°F under any conditions. The radiant heating system must be turned off or reduced for at least 48 hours prior to installation to allow proper adhesive bonding. Maintain a minimum ambient temperature of 65°F for at least 48 hours before installation, during installation, and for 72 hours after installation. After installation, gradually increase the radiant heat so that both the substrate and flooring acclimate together, as rapid temperature changes may cause thermal shock and bond failure.

IMPORTANT: ReadyRazzo® Tiles are porous and must be properly sealed to prevent staining. Refer to Section 10 for sealing requirements prior to exposing the floor to traffic.

2) INSTALLATION TOOLS CHECKLIST

Ensure the tools checklist is reviewed prior to any training and/or installation, and that all required equipment is available in advance.

Note: The complete tool list may vary depending on the installation type and selected finish. The items below represent the minimum requirements for most installations.

Personal Protective Equipment (PPE)

- dust mask, gloves, safety glasses, booties, protective suit, etc.

Surface Prep & Cleaning

- Mop and bucket with wringer
- Wet/dry vacuum (*dry vacuum must meet HEPA requirements per OSHA silica standards*)
- White cotton rags and mineral spirits
- Microfiber flat mops
- Polyethylene sheets
- Fox tail / rat tail brush
- Stand-up squeegee
- Large trash bags

Cutting & Fabrication Tools

- Wet saw or dry saw with HEPA vacuum attachment
- Angle grinder with wet or dry cutting kit and HEPA vacuum attachment
- Continuous-rim diamond blade
- Cap snips
- Razor scraper with blades
- Utility knife and blades

Installation & Layout Tools

- 100 lb. floor roller
- Hand roller and wall roller
- 1/16" square notch adhesive trowels
- Suction cups for lifting tiles
- Heat gun
- 10' and 8' straight edges
- Mobile (folding) workbench
- Extension cords

Grouting & Finishing Tools

- 1/16" tile spacers
- Lint-free microfiber roller

Adhesive & Caulking Tools

- Color-coordinated silicone caulk
- Caulking gun

3) MOISTURE TESTING AND ADHESIVE

Moisture testing is mandatory and must be conducted in accordance with ASTM F2170 – *Standard Test Method for Determining Relative Humidity in Concrete Slabs Using in situ Probes*, regardless of slab age or grade level.

The general contractor or owner is responsible for ensuring that moisture testing is completed. The flooring contractor must request and review test results prior to installation, or perform the testing independently.

The Wagner Rapid RH® 4.0 system is recommended for obtaining accurate, certified results when installed at the proper depth within the concrete slab. If test results are in question, testing should be performed by an International Concrete Repair Institute (ICRI) Tier 2 Certified Technician.

If drilling into the subfloor is not possible, contact Summit International Flooring for guidance before proceeding.

Moisture test results must not exceed the maximum relative humidity limits specified for the adhesive. If results exceed acceptable levels, installation must not proceed until the subfloor dries to within acceptable limits or an appropriate moisture mitigation system is installed in accordance with ASTM F3010 and the manufacturer's written instructions.

All test methods, results, and supporting documentation, including photographs, must be provided to the flooring contractor, general contractor, owner, and/or architect prior to installation. Installation may proceed only after acceptable ASTM F2170 results are confirmed.

Approved Adhesives

Always follow the adhesive manufacturer's written instructions and Safety Data Sheets (SDS).

Mapei Ultrabond ECO 373 or ECO MS4

- ASTM F2170: ≤ 90% RH
- Coverage: approximately 125–185 sq ft per gallon
- Trowel: 1/16" x 1/16" x 1/16" square notch

Additional Requirements:

pH testing is required. Do not install if pH is 12 or greater. If performing a calcium chloride test (ASTM F1869), do not install if the moisture vapor emission rate exceeds 8 lbs per 24 hours.

4) HANDLING AND STORAGE

If packaging is damaged upon delivery, photograph the damage and note it on the shipping documents before signing. Notify the shipper and Summit International Flooring immediately.

Handle ReadyRazzo® Tiles with care, as they may crack or break if mishandled. Do not install any material that is distorted, damaged, or otherwise compromised during shipping or storage.

Summit International Flooring inspects and labels materials prior to shipment; however, it remains the responsibility of the flooring contractor to inspect all products before installation. Do not install incorrect materials, visibly defective products, or materials with damage. Installation constitutes acceptance, and warranty claims will not be honored for materials installed with visible defects or incorrect specifications.

Upon delivery, remove tiles from pallets immediately and place them in a properly conditioned area. Do not stack pallets.

ReadyRazzo® Tiles are flexible and will conform to the substrate beneath them, requiring careful handling and storage. Stack tiles with the walking surface facing upward in piles no greater than 3 inches high on a hard, smooth surface, ensuring tiles remain flat and parallel. Allow tiles to acclimate in this manner for a minimum of 72 hours prior to installation.

Protect all materials and maintenance products from extreme temperatures during storage, including conditions commonly found in trailers or storage containers.

If materials remain on pallets for more than 45 days prior to installation, reconditioning may be required. Contact Summit International Flooring for guidance before proceeding.

5) SITE CONDITIONS

Areas must be fully enclosed, weather-tight, and maintained under stable environmental conditions prior to, during, and after installation.

Maintain a consistent service temperature of 60°F to 80°F ($\pm 5^\circ\text{F}$) and an ambient relative humidity between 35% and 65% for at least 72 hours prior to installation, throughout installation, and for a minimum of 96 hours after installation.

The substrate temperature must be at least 5°F above the dew point at all times. For example, if ambient conditions are 70°F and 65% relative humidity, the dew point is 57°F, and the substrate temperature must be at least 62°F before proceeding. Dew point calculators are available online to verify conditions.

If temporary or supplemental climate control systems are used instead of permanent HVAC, they must be capable of maintaining consistent temperature and humidity within the required ranges for the specified duration. Do not use fans or other methods to force dry adhesives or patching compounds.

Areas exposed to direct sunlight, such as through doors or windows, must be protected using blinds, curtains, cardboard, or similar materials for 24 hours prior to installation, during installation, and for at least 72 hours after installation to allow proper adhesive curing.

Always follow the adhesive manufacturer's instructions for application and curing conditions.

6) SUBSTRATE PREPARATION

The substrate must be properly prepared prior to installation. When cleaning, use only dustless vacuum systems to remove all dirt and debris.

6.1) Concrete Subfloors

All concrete subfloors must be absorptive, permanently dry, clean, smooth, and structurally sound in accordance with ASTM F710 – *Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring*. Surfaces must be free of dust, solvents, paint, wax, oil, grease, asphalt, old adhesives, and any contaminants that may interfere with adhesion or void the warranty. These must be removed by mechanical means only.

Dustless diamond grinding is a recommended method, as it removes contaminants while smoothing the surface. All dry grinding must comply with OSHA silica standards (Table 1). The installing party is responsible for verifying substrate suitability and porosity.

Water Droplet Test:

To confirm the substrate is absorptive (porous), apply a dime-sized drop of clean water to the prepared surface. The water must absorb within 15 minutes. All leveling or patching compounds must be a minimum of 1/8" in depth to be considered absorptive.

If the substrate is non-absorptive (e.g., polished or burnished), it must be mechanically prepared using methods such as shot blasting, diamond grinding, or a DiamaBrush system (25 or 100 grit), with proper dust control.

ReadyRazzo® Tiles are flexible and will conform to the substrate beneath them. The substrate must therefore be smooth (ridge-free) and flat within $\leq 1/8"$ over 10 feet. Irregularities must be corrected using a commercial-grade self-leveling or patching compound with a minimum compressive strength of ≥ 3000 psi, applied at a minimum thickness of 1/8" and installed per the manufacturer's instructions. Once cured, sand the surface smooth and clean thoroughly.

Expansion or moving joints must not be covered or filled. Use an appropriate expansion joint system where required. Dormant control joints and cracks must be cleaned and filled with a suitable patching or leveling compound, finished smooth in accordance with manufacturer instructions.

Adhesive and Grout Testing:

Perform an adhesive test in a non-critical area to determine working time. Apply approximately 1 sq ft of adhesive using the specified trowel and monitor the drying process. On porous substrates, tiles may be installed into semi-wet adhesive. Working time begins once the adhesive becomes dry to the touch and typically allows up to 2 hours, depending on site conditions. This test helps establish proper installation pacing.

A grout test is also recommended to evaluate potential staining. Mapei Flexcolor CQ is designed with colored quartz aggregate to reduce staining risk. Substituting other grouts, particularly unsanded types, may increase the likelihood of staining the natural aggregates in ReadyRazzo® Tiles. Testing is recommended whenever grouting natural stone materials.

Safety and Compliance:

Follow all local, state, and federal regulations. Do not sand, dry sweep, dry scrape, drill, saw, shot-blast, or otherwise disturb existing resilient flooring or adhesives, as they may contain asbestos fibers and/or crystalline silica. Avoid creating airborne dust. If materials are not confirmed to be asbestos-free, they must be treated accordingly and handled in compliance with all applicable regulations. Refer to RFCI guidelines (*Recommended Work Practices for Removal of Resilient Floor Coverings*, www.rfci.com) and OSHA silica standards (www.osha.gov/silica/) for additional information.

6.2) Other Substrates

For all non-concrete substrates, contact Summit International Flooring prior to installation for project-specific guidance, potential site review, and preparation requirements.

7) LAYOUT

The material layout should be determined by the architect, designer, or end user. ReadyRazzo® Tiles (2' x 2') are typically installed point-to-point. Panels (2' x 4') are not recommended for butt-joint installation in this system.

Establish starting lines using a string line, straight edge, and the 3:4:5 method to ensure a square layout. Plan carefully to avoid small perimeter cuts.

ReadyRazzo® Tiles are a natural product, and each tile is individually cast—no two tiles are identical. Tiles must be dry laid in sequenced courses prior to installation to evaluate visual consistency. Step back and review the layout to ensure a smooth transition between tiles. Tiles may be rotated, repositioned, or used as perimeter cuts as needed to achieve a balanced and uniform appearance.

It is recommended that the specifier and/or end user review and approve the layout before proceeding with installation.

8) INSTALLATION

Once the substrate is properly prepared, the installation area must remain clean and free of traffic or interference from other trades. Use only dustless vacuum systems to remove debris prior to installation.

Tiles may be cut using a wet or dry saw, or an angle grinder with an appropriate wet or dry cutting kit and continuous-rim diamond blade. Dry cutting is often preferred, as it avoids introducing moisture and eliminates the need to dry tiles before installation. Do not use conventional tile cutters.

If sanitary cove base (flash cove) is required, it must be installed prior to the floor tile. Inspect all wall substrates to ensure they are flat, dry, and suitable for adhesion. Do not proceed if repairs are required. Dry fit all cove base pieces, beginning at a door frame or inside corner and continuing around the perimeter. Pieces should be match-marked and cut to fit, maintaining tight butt joints and a consistent 1/16" gap at door frames. A heat gun may be used to assist with fitting. Adhere each section using Mapei Ultrabond ECO 373, ECO MS4, or Mapei Type 1 adhesive, pressing firmly into place and rolling to ensure proper bond. Remove excess adhesive immediately.

For tile installation, begin from the center of the room using established start lines. In corridors or smaller spaces, installation may proceed lengthwise from one end. Install tiles using 1/16" spacers to maintain consistent grout joints, and maintain a 1/16" gap at vertical obstructions such as walls and door frames.

Before installing each row, dry lay a three-tile-wide section along the full length of the row to verify visual consistency. Once approved, stack tiles in sequence near the starting point to maintain order during installation.

Apply Mapei Ultrabond ECO 373 or ECO MS4 adhesive evenly using a 1/16" x 1/16" x 1/16" square notch trowel, ensuring full coverage without puddles or voids. Avoid sharp turns with the trowel, as this may result in uneven adhesive distribution and bond failure.

After achieving the proper adhesive condition (as determined during testing), place tiles into the adhesive bed using spacers. Immediately roll each row using a 100 lb. roller in both north–south and east–west directions. Continue rolling previously installed rows along with the current row until each area has been rolled at least three times in each direction.

Once the adhesive has set and tiles no longer move under foot, apply Mapei Flexcolor CQ grout in accordance with the manufacturer's instructions. Remove excess grout using a damp sponge and clean the surface thoroughly.

Wall tiles or bullnose cove base tiles may be installed after the floor tile, either directly on the floor tile or over the sanitary cove base. Carry floor joints through to the wall, and fill all joints with color-matched silicone caulk. Adhere wall pieces using Mapei Type 1 adhesive, double-sided contact tape (Siga or similar), or Mapei Ultrabond ECO 373 or ECO MS4. Roll firmly into place and re-roll periodically to ensure proper bond. Use heat as needed to accommodate wall irregularities.

9) CLEANING PRIOR TO FINISHING

Remove all surface soil, debris, sand, and grit by sweeping, dust mopping, or vacuuming. Clean the floor using a neutral pH (7) detergent, such as Hillyard Super Shine All or equivalent, following the manufacturer's dilution and application instructions. Apply using a mop and bucket with minimal solution—do not saturate the floor or allow dirty water to enter grout joints.

Scrub the surface with a single-disc machine or automatic scrubber using an appropriate pad (red or white, depending on soil level). Remove the resulting slurry using a vacuum or wet vacuum, then rinse thoroughly with clean water and allow the floor to dry completely before proceeding.

10) PRIMING/SEALING AND FINISHING

CRITICAL: ReadyRazzo® Tiles are porous and must be properly sealed to prevent staining. Failure to follow sealing requirements may result in permanent surface damage and void the warranty.

Once installation, grouting, and cleaning are complete, the floor must be sealed prior to exposure to foot traffic or contaminants. Allow grout to fully cure in accordance with the manufacturer's instructions before applying any sealer.

As a general guideline, apply five (5) coats of an approved sealer, such as Diverzey Plaza Plus, using a roller and allowing 15–20 minutes drying time between coats, unless otherwise specified.

Sealing systems and procedures may vary depending on project conditions and the selected finish. Any project-specific instructions provided at the time of order must be followed in full and take precedence over these general guidelines.

11) ADDITIONAL INFORMATION

Because the majority of dirt in a building is tracked in from outside, installing and maintaining entrance matting is strongly recommended at all exterior entry points. For primary entrances, 20–30 linear feet of matting is recommended; smaller or less frequently used entrances may require less. Proper matting improves indoor air quality, reduces maintenance costs, and extends the life of the flooring.

To prevent surface damage, all furniture that may move across the floor must be fitted with protective glides at least 1 inch in diameter. Heavy objects such as equipment, appliances, fixtures, and large furniture must not be moved directly across the floor; use protective boards or similar measures to prevent damage.

Direct sunlight may cause UV-related fading or discoloration. To minimize this risk, specify Low-E glass that reduces UV transmission to less than 1%. If adequate UV protection is not already in place, apply a protective window film such as 3M™ (or equivalent) to achieve similar performance. Follow the manufacturer's recommendations for selection and installation.

These instructions supersede any verbal or written guidance and must be followed for warranty coverage to remain valid.