

Ker 111

Basic Tile Mortar with Polymer



DESCRIPTION

Ker[®] 111 is a single-component, thin-set mortar for interior and exterior installations of stone, ceramic, porcelain and quarry tile. This mortar is formulated with a unique dry polymer, resulting in good adhesion to the substrate and tile.

FEATURES AND BENEFITS

- Economical, polymer-modified mortar that only requires the addition of water

INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification C2
- ANSI: Exceeds ANSI A118.4 bond strength requirements

WHERE TO USE

- Most interior/exterior residential installations on floors and walls
- Most interior/exterior commercial installations on floors
- Most interior commercial installations on walls

LIMITATIONS

- Install only at temperatures between 40°F and 95°F (4°C and 35°C).
- Do not use for moisture-sensitive stone (green marble, some limestone and some granite), agglomerate tiles or resin-backed tiles. Instead, use suitable epoxy or urethane adhesives. See the respective Technical Data Sheet for more information.
- Do not use over dimensionally unstable substrates such as hardwood flooring, oriented strand board (OSB), substrates containing asbestos, or metal. See the “Suitable Substrates” section below.
- To use directly over gypsum-based patching or leveling substrates, first apply a suitable sealer/primer before use. See the technical bulletin “Tiling over gypsum” in the Tile & Stone Installation Systems section of MAPEI’s Website.
- For light-colored and translucent natural stone as well as transparent and translucent glass, a white mortar is recommended.
- Do not use for installations subject to water immersion such as pools and spas.
- *Ker 111* is not recommended for areas subject to severe freeze/thaw conditions. For the best performance, use a MAPEI mortar system with a liquid latex additive.
- Do not use on exterior commercial building facades, such as shopping malls, office buildings, high-rise residential units, etc.

SUITABLE SUBSTRATES

- Concrete (cured at least 28 days)
- Masonry cement block, brick, cement mortar beds and leveling coats
- Cement backer units (CBUs) – see manufacturer’s installation guidelines
- Gypsum wallboard and plaster – interior walls in dry areas only (priming may be required). See the “Surface preparation requirements” reference guide in the Tile & Stone Installation Systems section of MAPEI’s Website.

Consult MAPEI’s Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- All substrates should be structurally sound, stable, dry, clean and free of any substance or condition that may reduce or prevent proper adhesion.

See the “Surface preparation requirements” reference guide in the Tile & Stone Installation Systems section of MAPEI’s Website.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

1. Into a clean mixing container, pour about 1.25 to 1.5 U.S. gals. (4.73 to 5.68 L) of clean, potable water.
2. Gradually add 50 lbs. (22.7 kg) of powder while slowly mixing.

3. Use a low-speed mixing drill (at about 300 rpm), with an angled cross-blade mixer or auger mixer. Mix thoroughly until the mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
4. Mix for 3 minutes.
5. Let the mixture stand ("slake") for 5 minutes.
6. Remix for 1 minute.
7. If the mixture becomes heavy or stiff, remix without adding more liquid or powder.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Choose a notched trowel (see the "Approximate Coverage" chart below) with sufficient depth to achieve greater than 80% mortar contact to both the tile and substrate for all interior applications, and greater than 95% for exterior installations and wet applications. It may be necessary to back-butter tiles in order to meet these requirements. (Refer to ANSI A108.5 specifications and TCNA Handbook guidelines.)
2. With pressure, apply a coat by using the trowel's flat side to key mortar into the substrate.
3. Apply additional mortar, combing it in a single direction with the trowel's notched side.
4. Spread only as much mortar as can be tiled before the product skins over. Open time can vary with jobsite conditions.
5. Place the tiles firmly into the wet mortar. Push the tiles back and forth in a direction perpendicular to the trowel lines, to collapse the mortar ridges and to help achieve maximum coverage. Ensure proper contact between the mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage.
6. Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting (see ANSI A108.10 guidelines).

EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints as specified per TCNA Method EJ171, or TTMAC Specification Guide 09 30 00, Detail 301MJ. Do not cover expansion joints with mortars.

CLEANUP

- Clean tools and tile while the mortar is fresh, using water only.

PROTECTION

- Protect the installation from foot traffic for 16 to 24 hours and from heavy traffic for 7 days.
- Protect the installation from rain for 7 days.

ISO 13007 Classification

Classification Code	Classification Requirement
C2 (cementitious, improved adhesion)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles

ANSI Specification

Test Method	Test Results
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1.38 MPa) at 28 days
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2.07 MPa) at 28 days
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days

Shelf Life and Application Properties*

at 73°F (23°C) and 50% relative humidity

Shelf life	1 year when stored in original, unopened packaging
Open time*	20 to 30 minutes
Pot life*	> 2 hours
Time before grouting	24 hours
VOCs (Rule #1168 of California's SCAQMD)	0 g per L

*Open time and pot life vary based on jobsite conditions.

Packaging

Size and Color
Bag: 50 lbs. (22.7 kg), gray
Bag: 50 lbs. (22.7 kg), white

Typical Trowels and Approximate Coverage**

per 50 lbs. (22.7 kg)

Tile Size	Typical Trowel	Coverage
Ceramic mosaics, wall tiles and small modular tiles up to 6" x 6" (15 x 15 cm)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm), square-notch	75 to 90 sq. ft. (6.97 to 8.36 m ²)
Large modular tiles, from 6" x 6" (15 x 15 cm) to 16" x 16" (41 x 41 cm)	1/4" x 3/8" x 1/4" (6 x 10 x 6 mm), square-notch	55 to 65 sq. ft. (5.11 to 6.04 m ²)

**Trowel dimensions are width/depth/space. Actual coverage will vary according to substrate profile and tile type.



RELATED DOCUMENTS

- Reference guide: "Surface Preparation Requirements" for tile and stone installation systems***
- Technical bulletin: "Tiling over gypsum"***

*** At www.mapei.com

ADDITIONAL INFORMATION

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA).

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

CONTACT INFORMATION

MAPEI Headquarters of North America

1144 East Newport Center Drive
Deerfield Beach, Florida 33442
1-888-US-MAPEI (1-888-876-2734) / (954) 246-8888

Technical Services

U.S. and Puerto Rico:

Flooring: 1-800-992-6273

Concrete and heavy construction: 1-888-365-0614

Canada:

1-800-361-9309

Customer Service

1-800-42-MAPEI (1-800-426-2734)

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For the most current product data and BEST-BACKEDSM warranty information,
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