



# Ker<sup>®</sup> 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

#### LEED v4 Points Contribution

#### LEED Points

Environmental Product Declaration (EPD):

TCNA Industry Average for Mortars\* ..... 1/2 point

Health Product Declaration (HPD)\* ..... Up to 2 points

*\* Using this product may help contribute to LEED certification of projects in the categories shown above. Points are awarded based on contributions of all project materials.*

### 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. See MAPEI's technical bulletin "Gypsum-Based Floors and Walls: Which MAPEI Products Can Be Applied?" in the Related Documents section of the Tile & Stone Installation Systems page on 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 installation performance, use a MAPEI liquid latex additive mortar system.
- 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 MAPEI's "Surface Preparation Requirements" reference guide in the Related Documents section of the Tile & Stone Installation Systems page on 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 MAPEI's "Surface Preparation Requirements" reference guide in the Related Documents section of the Tile & Stone Installation Systems page on MAPEI's Website.

## **MIXING**

Choose all appropriate safety equipment before use. 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**

1. Choose a notched trowel (see the "Approximate Coverage" chart) with sufficient depth to achieve greater than 85% mortar contact to both the tile and substrate for all interior applications, and greater than 95% for exterior installations, commercial floor 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 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 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**

- Use water only to clean tools and tile while the mortar is fresh.

## **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) 	75 to 90 sq. ft. (6,97 to 8,36 m <sup>2</sup> )
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) 	55 to 65 sq. ft. (5,11 to 6,04 m <sup>2</sup> )

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

# Ker 111



## RELATED DOCUMENTS

Reference Guide: "Surface Preparation Requirements" for tile and stone installation systems\*

Technical Bulletin: "Gypsum-Based Floors and Walls: Which MAPEI Products Can Be Applied?"\*

\* At [www.mapei.com](http://www.mapei.com)

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

## 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 or 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

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Before using, the user must determine the suitability of our products for the intended use,

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