



# Keraflor®

## Standard Tile Mortar

When mixed with water



When mixed with Keraply®



### DESCRIPTION

*Keraflor* is a dry-set mortar for use in interior/exterior residential and light commercial floor applications.

### FEATURES AND BENEFITS

- For interior/exterior floors
- Can be used over plywood substrates when mixed with *Keraply*

### INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification C1 when mixed with water; classification C2S1 when mixed with *Keraply*
- ANSI: Exceeds ANSI A118.1 bond strength requirements when mixed with water; exceeds ANSI A118.4 and ANSI A118.11 bond strength requirements when mixed with *Keraply*

### WHERE TO USE

#### When mixed with water

- Most interior/exterior residential installations on floors
- Installation of ceramic tile, quarry tile, pavers and Saltillo tile

#### When mixed with Keraply

- Most interior/exterior residential and light commercial floor installations
- Installation of ceramic and porcelain tile, quarry tile, pavers, Saltillo tile, and most types of marble, granite and natural stone

### 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 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.
- For light-colored and translucent natural stone, a white mortar is recommended. Do not use for installations subject to water immersion, such as pools and spas.
- Not recommended for areas subject to severe freeze/thaw conditions. For the best performance, use a MAPEI mortar system with a liquid latex additive.

### SUITABLE SUBSTRATES

#### When mixed with water

- Concrete (cured for at least 28 days)
- Cement mortar beds and leveling coats

#### When mixed with Keraply

- The substrates listed above
- Cement backer units (CBUs) – see manufacturer’s installation guidelines
- Plywood underlayments must be a Group 1 exterior-grade plywood CC-plugged or better, conforming to APA classification and U.S. Product

Standard PS 1-95 or a "SELECT" or (SEL-TF) CANPLY classified exterior-grade plywood conforming to CSA-0121 standard for Douglas fir for direct-bond applications (interior, residential and light commercial floors and countertops in dry conditions only).

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 5 to 6 U.S. qts. (4.73 to 5.68 L) of clean potable water, or 1.5 to 2 U.S. gals. (5.68 to 7.57 L) of *Keraply*.
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 spiral mixer. Mix thoroughly until the mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
4. Let the mixture stand ("slake") for 5 minutes.
5. Remix for 1 minute.
6. If the mixture becomes heavy or stiff, remix it without adding more liquid.

## **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 more than 80% mortar contact to both the tile and substrate for all interior applications, and more than 95% for exterior installations, commercial floor and wet applications. It may be necessary to back-butter the tile/stone 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 trowel lines, to collapse the mortar ridges and 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 any expansion joints with mortar.

## **CLEANUP**

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

## **PROTECTION**

- Protect from traffic for 24 hours. Protect from heavy traffic for 7 days.
- Protect from frost and rain for 7 days.

**Product Performance Properties**  
**ISO 13007 Classification – when mixed with water**

Classification Code	Classification Requirement
C1 (cementitious, normal adhesion)	≥ 72.5 psi (0.5 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles

**Product Performance Properties**  
**ISO 13007 Classification – when mixed with Keraply**

Classification Code	Classification Requirement
C2 (cementitious, improved adhesive)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles
S1 (normal deformation of mortar)	≥ 0.1" (2.5 mm)

**ANSI Specifications – when mixed with water**

Test Method	Specification Standard	Test Results
ANSI A118.1– shear strength, impervious ceramic (porcelain) mosaics	> 150 psi (1.03 MPa) at 28 days	160 to 190 psi (1.10 to 1.31 MPa)
ANSI A118.1 – shear strength, glazed wall tile	> 250 psi (1.72 MPa) at 28 days	250 to 270 psi (1.72 to 1.86 MPa)
ANSI A118.1 – shear strength, quarry tile to quarry tile	> 100 psi (0.69 MPa) at 28 days	170 to 220 psi (1.17 to 1.52 MPa)

**ANSI Specifications – when mixed with Keraply**

Test Method	Specification Standard	Test Results
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1.38 MPa) at 28 days	200 to 280 psi (1.38 to 1.93 MPa)
ANSI A118.4 – shear strength, glazed wall tile,	> 300 psi (2.07 MPa) at 28 days	300 to 550 psi (2.07 to 3.79 MPa)
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	250 to 380 psi (1.72 to 2.62 MPa)
ANSI A118.11– shear strength, quarry tile to plywood	> 150 psi (1.03 MPa) at 28 days	150 to 300 psi (1.03 to 2.07 MPa)

**Shelf Life and Product Characteristics** before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C)
Physical state	Powder
Colors	White, gray

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

**Application Properties\*** at 73°F (23°C) and 50% relative humidity

Open time*	15 to 20 minutes
Pot life*	> 2 hours
Time before grouting*	24 hours
VOCs (Rule #1168 of California's SCAQMD)	0 g per L

\* Open time, pot life and time before grouting vary based on jobsite conditions.

# Keraflor®



## Packaging

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

## Approximate Coverage\* per 50 lbs. (22.7 kg)

Typical Trowel		Coverage
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> )
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.

## RELATED DOCUMENTS

Reference guide: "Surface preparation requirements" for tile and stone installation systems\*\*

\*\* 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.

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