

Keraset

Professional Tile Mortar



When mixed with Keraply



DESCRIPTION

Keraset® is a dry-set mortar for use in interior/exterior residential and light commercial floor and wall applications.

FEATURES AND BENEFITS

- For tile and stone on floors and walls
- Great over plywood when mixed with Keraply®

INDUSTRY STANDARDS AND APPROVALS

ANSI

- When mixed with water, exceeds ANSI A118.1 bond strength requirements
- When mixed with Keraply, exceeds ANSI A118.4E and ANSI A118.11 bond strength requirements

ISO 13007

- When mixed with water, classification C1
- When mixed with Keraply, classification C2ES1P1

WHERE TO USE

When mixed with water

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

- Installation of ceramic tile, quarry tile, pavers, Saltillo tile, and most types of marble, granite and natural stone

When mixed with Keraply

- The uses listed above
- Most exterior commercial installations
- Installation of porcelain tile
- For installations subject to water immersion, such as pools and spas
- For areas subject to severe freeze/thaw conditions

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, cultured marble or resin-backed tiles. Instead, use suitable epoxy or urethane adhesives (see respective Technical Data Sheet for more information). For installations of light-colored and translucent natural stone, a white mortar is recommended.
- 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.
- Do not use on exterior commercial building facades (such as shopping malls, office buildings and high-rise residential units).

SUITABLE SUBSTRATES

When mixed with water

- Concrete (cured for at least 28 days)
- Masonry cement block, brick, cement mortar beds and leveling coats

When mixed with Keraply

- The substrates listed above
- Cement backer units (CBU) – 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.
- 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).
- Vinyl composition tile (VCT), plastic laminate countertops, non-cushioned sheet vinyl and cutback residue (interior installations)
- Existing ceramic and porcelain tile, cement terrazzo, quarry tile and pavers (interior and dry conditions only)
- MAPEI waterproofing, crack-isolation and sound-reduction membranes

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 5.5 to 6 U.S. qts. (5.20 to 5.68 L) of clean potable water, or 1.8 to 2 U.S. gals. (6.81 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 double-box mixer. Mix thoroughly until mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
4. Let mixture stand (“slake”) for 5 minutes.
5. Remix.
6. If mixture becomes heavy or stiff, remix without adding more liquid or powder.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Choose a typical 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 reach 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 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, Method 301MJ. Do not cover expansion joints with mortars.

CLEANUP

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

PROTECTION

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

ISO 13007 Classification

Classification Code	Classification Requirement
When mixed with water	
C1 (cementitious, normal adhesive)	≥ 72.5 psi (0.5 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles
When mixed with <i>Keraply</i>	
C2 (cementitious, improved adhesive)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles
E (extended open time)	≥ 72.5 psi (0.5 MPa) after 20 and 30 minutes
S1 (normal deformation of mortar)	≥ 0.1" (2.5 mm)
P1 (normal adhesion to plywood)	≥ 72.5 psi (0.5 MPa)

ANSI Specifications

Test Method	Specification Standard	Test Results
When mixed with water		
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	270 to 310 psi (1.86 to 2.14 MPa)
ANSI A118.1 – shear strength, quarry tile to quarry tile	> 100 psi (0.69 MPa) at 28 days	190 to 250 psi (1.31 to 1.72 MPa)
When mixed with <i>Keraply</i>		
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1.38 MPa) at 28 days	200 to 400 psi (1.38 to 2.76 MPa)
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2.07 MPa) at 28 days	400 to 700 psi (2.76 to 4.83 MPa)
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	400 to 600 psi (2.76 to 4.14 MPa)

ANSI A118.4E – extended open time	≥ 72.5 psi (0.5 MPa) at 30 minutes	Pass
ANSI A118.11 – shear strength, quarry tile to plywood	> 150 psi (1.03 MPa) at 28 days	200 to 350 psi (1.38 to 2.41 MPa)

Shelf Life and Product Characteristics

before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C)
Colors	Gray and white

Application Properties

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

Open time*	20 to 30 minutes
Pot life*	> 2 hours
Time before grouting*	24 hours
VOC content	0 g per L

* Actual open time, pot life and time before grouting will vary based on jobsite conditions.

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), square-notched	75 to 90 sq. ft. (6.97 to 8.36 m ²)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm), square-notched	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).

WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. Please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

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.**

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For the most current product data and BEST-BACKEDSM warranty information,
visit www.mapei.com.
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