

Kerabond/Keralastic System

Premium, Flexible Tile Mortar



DESCRIPTION

Kerabond/Keralastic™ System is a high-performance, two-part system: Keralastic®, a second-generation “flexible” acrylic latex additive, is used to enhance the performance of Kerabond®, which is a premium-grade dry-set mortar. This system has exceptional bond strength, flexural strength, elongation and freeze/thaw durability. To ensure proper flexibility, always use a latex additive when applying a dry-set mortar over plywood or difficult-to-bond tiles.

FEATURES AND BENEFITS

- High-performance bond
- Best for most difficult tiles, substrates and conditions

INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification C2ES2P2
- ANSI: Exceeds ANSI A118.4E, ANSI A118.11 and ANSI A118.15E bond strength requirements

WHERE TO USE

- Installation of ceramic and porcelain tile, glass tile, quarry tile, pavers, Saltillo tile, and most types of marble, granite and natural stone
- For installations subject to intermittent water exposure

- For installations in freeze/thaw environments, in submerged conditions or with select substrates (see “Suitable Substrates” section below)
- For all interior/exterior residential, heavy commercial and industrial installations on floors, walls and ceilings
- MAPEI’s waterproofing, crack-isolation, sound-reduction and uncoupling membranes over suitable substrates for these membranes

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 Sheets for more information.)
- Some glass tile backings may not be suitable for use with *Kerabond/Keralastic*. Consult the recommendations of the TCNA and the glass tile manufacturer. All tiles should conform to ANSI 137.1 or ANSI 137.2 Glass Tile Standard; otherwise, see tile manufacturers for additional information and recommendations.
- For installations of light-colored and translucent natural stone, transparent and translucent glass, 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.
- To use directly over gypsum-based patching or leveling substrates, apply a suitable sealer/primer before use. See the “Tiling over gypsum” technical bulletin in the Tile & Stone Installation Systems section of MAPEI’s Website.
- Consult local building code requirements for use on exterior commercial facades.
- Installations of tile over nonporous surfaces, such as waterproofing membranes and existing tile, may require extended setting/curing times.
- For improved performance and longevity, mix *Kerabond* with *Keralastic* instead of with water for areas subject to freeze/thaw, heavy-duty wet areas, and areas subject to water immersion or temperature extremes.

SUITABLE SUBSTRATES

- Concrete (cured at least 28 days)
- Masonry cement block, brick, cement mortar beds, and rendering and leveling coats
- Cement terrazzo
- 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.
- Radiant-heated substrates
- 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).
- 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 2 U.S. gals. (7.57 L) of *Keralastic*.
2. Gradually add 50 lbs. (22.7 kg) of *Kerabond* 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 the mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
4. Let the mixture stand ("slake") for 5 minutes.
5. Remix.
6. 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 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 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, using the trowel's notched side to comb the mortar in a single direction parallel to the tile's shortest dimension.
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, 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 from traffic for 24 hours. Protect from heavy traffic for 7 days.
- Protect from frost and rain for 7 days.
- Protect from water immersion and freezing for 21 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
E (extended open time)	≥ 72.5 psi (0.5 MPa) after 20 to 30 minutes
S2 (improved deformation of mortar)	≥ 0.2" (5 mm)
P2 (improved adhesion to plywood)	≥ 145 psi (1 MPa)

ANSI Specifications*

Test Method	Specification Standard	Test Results
ANSI A118.11 – shear strength, quarry tile to plywood	> 150 psi (1.03 MPa) at 28 days	250 to 360 psi (1.72 to 2.48 MPa)
ANSI A118.15E – (extended open time)	> 75 psi (0.52 MPa) at 30 minutes	Pass
ANSI A118.15 – shear strength, impervious ceramic (porcelain) mosaics	> 400 psi (2.76 MPa) at 28 days	400 to 500 psi (2.76 to 3.45 MPa)
ANSI A118.15 – shear strength, glazed wall tile	> 450 psi (3.10 MPa) at 7 days	660 to 880 psi (4.55 to 6.07 MPa)
ANSI A118.15 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	550 to 850 psi (3.79 to 5.86 MPa)

*Anything that meets A118.15 by definition meets or exceeds A118.4.

Shelf Life and Application Properties

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

Shelf life	1 year for <i>Kerabond</i> and 2 years for <i>Keralastic</i> when stored in original, unopened packaging
Open time**	20 to 30 minutes
Pot life**	> 2 hours
Time before grouting**	24 hours
VOC content (SCAQMD Rule 1168)	< 65 g per L
Typical VOC content per SCAQMD Rule 1168 testing methods	Powder: 0 g per L Liquid: 1 g per L

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

Packaging

Size and Color
Bag, powder: 50 lbs. (22.7 kg), gray
Bag, powder: 50 lbs. (22.7 kg), white
Jug, liquid: 2 U.S. gals. (7.57 L)
Pail, liquid: 5 U.S. gals. (18.9 L)
Drum, liquid: 55 U.S. gals. (208 L)

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-notch	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-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 Safety Data Sheet (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) or sustainability-durabilite@mapei.com (Canada).

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.**

CONTACT INFORMATION

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