

Kerabond T / Keralastic System

Premium, Flexible Large-and-Heavy-Tile and Thin-Set Mortar



DESCRIPTION

Kerabond® T / 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 T*, which is a premium-grade, large-and-heavy-tile mortar and thin-set mortar. This system has exceptional bond strength, flexural strength, elongation and freeze/thaw durability.

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 A118.4HE, A118.11 and A118.15HE 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 installing large-format tile and stone

- For installations subject to intermittent water exposure
- For installations in freeze/thaw environments, in submerged conditions and with select substrates (see the “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 respective Technical Data Sheets for more information).
- Some glass tile backings may not be suitable for use with *Kerabond T / Keralastic*. Consult the recommendations of the Tile Council of North America (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 recommendation.
- For translucent or transparent glass tile, use white *Granirapid*® or *Adesilex*™ P10.
- Use a white mortar when installing light-colored stones and translucent marble.
- 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.
- Large-and-heavy-tile mortars are not designed to correct uneven floors. Substrates must be flat and level (according to substrate flatness requirements in ANSI A108.02) before the installation of large-format tile.
- For improved performance and longevity, mix *Kerabond T* 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 for at least 28 days)
- Masonry cement block, brick, cement mortar beds, and render 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.
- 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, noncushioned 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, sound-reduction and uncoupling 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. See 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 T* 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 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 for up to 2 hours 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" section below) with sufficient depth to achieve greater than 80% mortar contact with 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 achieve 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 the mortar into the substrate.
3. Apply additional mortar, combing it in a single direction parallel to the tile's shortest dimension, with the trowel's notched side.
4. Spread only as much mortar as can be tiled before 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 recommended 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 to 48 hours, so that the mortar is sufficiently set. Protect from heavy traffic for 7 days.
- Protect from rain or frost for 7 days.
- Protect from water immersion for 21 days.

ISO 13007 Classification

Classification Code	Classification Requirement
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 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 400 psi (1.72 to 2.76 MPa)
ANSI A118.15 – shear strength, impervious ceramic (porcelain) mosaics	> 400 psi (2.76 MPa) at 28 days	400 to 600 psi (2.76 to 4.14 MPa)
ANSI A118.15 – shear strength, impervious ceramic (porcelain) mosaics, heat aging	> 400 psi (2.76 MPa) at 28 days	400 to 600 psi (2.76 to 4.14 MPa)
ANSI A118.15 – shear strength, glazed wall tile	> 450 psi (3.10 MPa) at 7 days	450 to 600 psi (3.10 to 4.14 MPa)
ANSI A118.15 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	500 to 700 psi (3.45 to 4.83 MPa)
ANSI A118.15H – mortar for large and heavy tile	ASTM C627 Robinson Floor Test Lippage change < 1/64" (0.4 mm)	Pass
ANSI A118.15E – extended open time	> 75 psi (0.52 MPa) at 30 minutes	Pass

* 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 (<i>Kerabond T</i>); 2 years (<i>Keralastic</i>)
Open time**	20 to 30 minutes
Pot life**	> 2 hours
Time before grouting**	24 to 48 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.

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	85 to 95 sq. ft. (7.90 to 8.83 m ²)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm), square-notch	65 to 75 sq. ft. (6.04 to 6.97 m ²)
1/2" x 1/2" x 1/2" (12 x 12 x 12 mm), square-notch	40 to 50 sq. ft. (3.72 to 4.65 m ²)
3/4" x 9/16" x 3/8" (19 x 14 x 10 mm), U-notch	35 to 40 sq. ft. (3.25 to 3.72 m ²)

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

Packaging

Size and Color
<i>Kerabond T</i> bag, powder: 50 lbs. (22.7 kg), gray
<i>Kerabond T</i> bag, powder: 50 lbs. (22.7 kg), white
<i>Keralastic</i> jug, liquid: 2 U.S. gals. (7.57 L)
<i>Keralastic</i> pail, liquid: 5 U.S. gals. (18.9 L)
<i>Keralastic</i> drum, liquid: 55 U.S. gals. (208 L)

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.

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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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