

# Kerapoxy 410

Premium, 100%-Solids, Epoxy Setting Mortar



## DESCRIPTION

*Kerapoxy 410*<sup>®</sup> is a two-component, solvent-free, 100%-solids, epoxy setting floor and wall mortar that is suited for areas where the most chemical-resistant setting material is necessary. It also has high compressive strength, which provides excellent impact strength in commercial facilities. *Kerapoxy 410* is designed for setting most types of tile and stone.

## FEATURES AND BENEFITS

- Chemical resistance
- For setting moisture-sensitive stone
- High compressive strength

## INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification R2
- ANSI: Meets ANSI A118.3 industry standards

## WHERE TO USE

- Most interior/exterior residential, commercial, industrial and institutional installations on floors and walls where high mortar strength is required
- Installation of ceramic and porcelain tile, quarry tile, pavers, Saltillo tile, and most types of marble, granite and natural stone

- For setting most moisture-sensitive marble, stone and agglomerates

Note: Marble and granite are products of nature made from a vast combination of minerals and chemicals that may cause the material to behave or react in a manner beyond our control. Therefore, determine the suitability of all the materials before proceeding with the installation and test materials for possible staining and discoloration.

- For setting ceramic tile and acid-resistant floor brick and for installations requiring acid and chemical resistance
- For use over most dry, clean, TCNA-approved substrates

## LIMITATIONS

- Do not use *Kerapoxy 410* 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 walls as a full continuous building covering, as this will restrict moisture vapor transmission.
- Do not use in areas subject to excessive heat.
- The temperature of the tile, setting materials and substrate as well as the ambient temperature must be between 60°F and 90°F (16°C and 32°C) while spreading and until *Kerapoxy 410* has hardened sufficiently.
- Do not install *Kerapoxy 410* over crack-isolation and sound-reduction sheet membranes.
- Do not use *Kerapoxy 410* as a grout.

## SUITABLE SUBSTRATES

- Concrete (cured for 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 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 only)
- Existing ceramic and porcelain tile, cement terrazzo, epoxy terrazzo, quarry tile and pavers (interior and dry conditions only)
- Steel and stainless steel
- MAPEI waterproofing membranes
- For recommendations over properly prepared stainless-steel pools, consult MAPEI's Technical Services Department before application.

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. Parts A and B are packaged to exact quantity ratios for proper curing.

1. Pour all material out of the Part B container into the Part A (paste) container. To improve flowability and texture, allow time for the Part B material to flow completely out of the container. Always mix complete units. Do not add other materials to this mixture.
2. Use a low-speed mixing drill (at about 300 rpm), with an angled cross-blade mixer or double-box mixer. Mix thoroughly until a homogenous, consistent color is obtained. Avoid prolonged mixing.
3. Wash hands and tools immediately with water before epoxy hardens. *Kerapoxy 410* is extremely difficult to remove once cured.
4. Do not place the lid on the container after *Kerapoxy 410* has been mixed.

## PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Remove the mixed product from the container and place in piles on the floor. *Kerapoxy 410* is a thermosetting product, so it sets up faster in a container or a large mass.
2. Choose a 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, industrial/institutional floors 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.)
3. With pressure, apply a coat by using the trowel's flat side to key mortar into the substrate.
4. Apply additional mortar, combing it in a single direction with the trowel's notched side.
5. Spread only as much mortar as can be tiled before the product skins over. Open time can vary with jobsite conditions.
6. Tile or stone must be dry before setting into *Kerapoxy 410*.
7. 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 mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage.
8. 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 mortar.

## CLEANUP

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

## PROTECTION

- Protect *Kerapoxy 410* from traffic for 24 hours and from heavy traffic for 7 days.
- Protect from frost and rain for 7 days.
- Protect from freezing. Store at 70°F (21°C) minimum for at least 24 hours before use. If material shows sign of partial crystallization, contact MAPEI's Technical Services Department for instructions.
- Protect from water immersion for 14 days.

### ISO 13007 Classification

Classification Code	Test Characteristics	Classification Requirement
<b>R2 (reaction resin adhesive, improved)</b>	Shear adhesion strength	$\geq 2 \text{ N/mm}^2$
	Shear adhesion strength after water immersion	$\geq 2 \text{ N/mm}^2$
	Open time: tensile adhesion strength	$\geq 0.5 \text{ N/mm}^2$ after not less than 20 minutes
	Shear adhesion strength after thermal shock	$\geq 2 \text{ N/mm}^2$

### ANSI Specifications

Test Method	Specification Standard	Test Results
ANSI A118.3 (5.1) – water cleanability	80 minutes	Pass
<b>ANSI A118.3 (5.2)</b>		
Initial setting time	> 2 hours	Pass
Service setting time	< 7 days	Pass
ANSI A118.3 (5.3) – shrinkage	< 0.25%	Pass
ANSI A118.3 (5.4) – sag	No change	Pass
ANSI A118.3 (5.5) – quarry shear bond	> 1,000 psi (6.90 MPa)	Pass

ANSI A118.3 (5.6) – compressive strength	> 3,500 psi (24.1 MPa)	Pass
ANSI A118.3 (5.7) – tensile strength	> 1,000 psi (6.90 MPa)	Pass
ANSI A118.3 (5.8) – thermal shock	> 500 psi (3.45 MPa)	Pass

### Shelf Life and Application Properties

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

Shelf life	2 years
Working time*	1 hour
Time before grouting*	24 hours
VOC content (SCAQMD Rule 1168)	< 65 g per L
Typical VOC content per SCAQMD Rule 1168 testing methods	27 g per L

\* Working time and time before grouting may vary based on jobsite conditions.

### Packaging

Size
Kit: 3 U.S. gals. (11.4 L)
Pail: Part A, 2.71 U.S. gals. (10.3 L)
Jug: Part B, 0.29 U.S. gal. (1.10 L)

### Approximate Coverage\*\*

per 3 U.S. gals. (11.4 L)

Typical Trowel	Coverage
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm), square-notched	55 to 70 sq. ft. (5.11 to 6.50 m <sup>2</sup> )
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm), square-notched	40 to 50 sq. ft. (3.72 to 4.65 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)

## 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](mailto:sustainability_USA@mapei.com) (USA) or [sustainability-durabilite@mapei.com](mailto: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](http://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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### Customer Service

1-800-42-MAPEI (1-800-426-2734)

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For the most current product data and BEST-BACKED<sup>SM</sup> warranty information,  
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