

# Kerapoxy SB

Premium, Spot-Bonding, Epoxy Setting Mortar



## DESCRIPTION

*Kerapoxy® SB* is a two-component, solvent-free, 100%-solids, high-strength epoxy mortar that is suited for the spot-bonding method of tile and stone installations on residential and commercial vertical applications. The nonsag, nonstaining formulation of *Kerapoxy SB* is designed for setting most types of tiles and stones.

## FEATURES AND BENEFITS

- Nonsag when applied at up to 1" (2.5 cm) thick
- Nonstaining formulation for light-colored marble and stone
- Easy to use, with a 1:1 mixing ratio by volume
- Sets within 45 minutes to 1 hour
- Provides long-lasting, durable, high-strength bonds

## INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification R2T
- ANSI: Meets ANSI A118.3 industry standards

## WHERE TO USE

- Epoxy spot-bonding of marble, granite, adhered masonry veneer and large-format ceramic tile
- Most interior residential and commercial installations on walls and overhead where high mortar strength is required
- Installation of ceramic and porcelain tile, pavers and most types of marble, granite and natural stone

- For setting most moisture-sensitive marble, stone and agglomerates
- For use over most dry, clean, TCNA-detailed substrates
- For fireplace surrounds, elevators and stair risers
- Approved for interior applications using TCNA methods W215 and W260

## LIMITATIONS

- Do not use over dimensionally unstable substrates or substrates containing asbestos. See the “Suitable Substrates” section below.
- Do not use on exterior walls.
- Do not use on floors.
- Do not use in areas subject to excessive heat.
- Do not use in wet areas.
- The tilework, substrate and ambient temperatures must be between 50°F and 95°F (10°C and 35°C) while applying and until *Kerapoxy SB* has hardened sufficiently.
- Do not install over crack-isolation or sound-reduction sheet membranes.
- The maximum weight for installed tile/stone is 20 lbs. per sq. ft. (73 kg per m<sup>2</sup>).
- Before using *Kerapoxy SB* for veneer installations, consult local building code requirements and veneer manufacturers' recommendations.

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.

## 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
- Steel and stainless steel\*
- Plywood 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.\*\*

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

\* *Steel and stainless-steel surfaces must be cleaned to remove oil, oxidation and bond-inhibiting agents.*

\*\* *Fire-treated, marine-grade and other chemically treated plywood panels are not acceptable substrates.*

## 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.
- Clean the back of stone mechanically at the areas that will receive *Kerapoxy SB* dabs.

- Brush off the resulting dust using a stiff brush. Wipe the entire surface with a damp sponge and dry with a cloth before applying *Kerapoxy SB*. The surface should be dry before product application.
- 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. Wear rubber gloves and avoid skin contact during mixing, application and cleaning. Refer to the Safety Data Sheet for details.

1. *Kerapoxy SB* can be hand-mixed in small quantities with a margin trowel by taking equal parts of Part A and Part B (1:1 mixing ratio by volume). Mix thoroughly for 2 to 3 minutes until a homogenous, consistent color is obtained. Do not add other materials to this mixture.
2. Larger quantities or full units can also be mixed with an electric drill. 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. For dual cartridges of *Kerapoxy SB*, use a cordless mixer (such as the type offered by Meritool) as well as a disposable mixing nozzle for dispensing.
4. Wash hands and tools immediately with soapy water or denatured alcohol before the epoxy hardens. *Kerapoxy SB* is extremely difficult to remove once cured.
5. Do not place the lid on the mixing container after *Kerapoxy SB* has been mixed.

## PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. *Kerapoxy SB* is a thermosetting product, so it sets up faster in a container or a large mass.
2. Apply dabs of *Kerapoxy SB* evenly distributed on the back of stone or tile: A minimum of five dabs, with one in each corner and one in the center. Cover at least 10% of the area of each piece. Finished dab thickness must be at least 1/8" (3 mm) but no more than 1" (2.5 cm).
3. See the table below for the approximate dab diameter required to achieve 10% coverage with 5 dabs:
 

<u>Tile size</u>	<u>Dab diameter</u>
12" x 12" (30 x 30 cm) .....	2" (5 cm)
24" x 24" (61 x 61 cm).....	4" (10 cm)
36" x 36" (91 x 91 mm).....	6" (15 cm)
4. After installation of *Kerapoxy SB* onto the back of the tile or stone, install onto the substrate and adjust for plumb and level.

## 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 epoxy mortar.

## CLEANUP

Use soapy water to clean tools and tile while the mortar is fresh. Solvents can be used for easier cleaning.

## PROTECTION

- Protect *Kerapoxy SB* from vibration and movement for 24 hours while curing.
- Cold temperatures will delay curing time.
- Protect from frost for 7 days.
- For end use, the installation area should not be subjected to temperatures higher than 122°F (50°C).
- Store at 70°F (21°C) minimum for at least 24 hours before use. Do not allow the product to freeze; if the material shows signs of partial crystallization, contact MAPEI's Technical Services Department for instructions.

### 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	$\geq 2 \text{ N/mm}^2$
	Transverse deformation	Greater than or equal to 0.1" (2.5 mm) and less than 0.2" (5 mm)
<b>T (vertical slip resistance)</b>	Slip-resistant	$\leq 0.019"$ (0.5 mm)

### ANSI Specifications

Test Method	Specification Standard	Test Results
ANSI A118.3 (5.2) – initial setting time	> 2 hours	Pass
ANSI A118.3 (5.2) – 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) – shear bond strength	> 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

<b>Shelf life</b>	2 years when stored in original, unopened packaging
<b>Pot life***</b>	30 to 45 minutes
<b>Setting time***</b>	5 hours
<b>VOC content (SCAQMD Rule 1168)</b>	< 65 g per L
<b>Typical VOC content per SCAQMD Rule 1168 testing methods</b>	13 g per L

\*\*\* See the "Temperature Effects" chart below.

### Temperature Effects on *Kerapoxy SB*

Temperature	Pot Life	Setting Time
40°F (4°C)	95 minutes	9 hours
73°F (23°C)	45 minutes	5 hours
90°F (32°C)	25 minutes	2.5 hours

### Packaging

Size
Kit: 2.6 U.S. gals. (10 L)
Part A, pail: 1.3 U.S. gals. (5 L)
Part B, pail: 1.3 U.S. gals. (5 L)
Dual cartridge: 20.3 U.S. oz. (600 mL) – 12 units per case
Disposable mixing nozzles – 12 units per box

### Approximate Coverage<sup>†</sup>

per 2.6 U.S. gals. (10 L)

Average Distance Out of Plumb	<i>Kerapoxy SB</i> Thickness	Coverage per Kit	Coverage for One Case (12) of Dual Cartridges
Plumb wall	1/8" (3 mm)	300 to 325 sq. ft. (27.9 to 30.2 m <sup>2</sup> )	220 to 240 sq. ft. (20.4 to 22.3 m <sup>2</sup> )
1/4" (6 mm)	3/8" (10 mm)	100 to 110 sq. ft. (9.29 to 10.2 m <sup>2</sup> )	70 to 80 sq. ft. (6.50 to 7.43 m <sup>2</sup> )

1/2" (12 mm)	5/8" (16 mm)	60 to 65 sq. ft. (5.57 to 6.04 m <sup>2</sup> )	43 to 48 sq. ft. (4.0 to 4.46 m <sup>2</sup> )
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<sup>†</sup> Coverage depends on the amount of product required to plumb the wall. This chart is based on 10% coverage of the area of each tile or stone piece.

## RELATED DOCUMENTS

- Reference guide: "Surface preparation requirements" for tile and stone installation systems<sup>††</sup>

<sup>††</sup> 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).

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