

# KERABOND PLUS

High-performance cementitious adhesive with extended open time for ceramic tiles and stone materials



## CLASSIFICATION ACCORDING TO ISO 13007-1 AND EN 12004

**Kerabond Plus** is a C2E class cementitious (C), improved (2), and extended open time (E) adhesive.

## WHERE TO USE

Bonding all types of ceramic tile (porcelain, single-fired, terracotta, double-fired, klinker, etc.) and mosaic on internal and external floors, walls, and ceilings. Also suitable for spot bonding insulating materials such as foam polystyrene, foam polyurethane, Rockwool, glass wool, soundproofing panels, etc.

## Some application examples

Bonding ceramic tiles, stone (if stable in damp environments), and mosaics on the following types of substrate:

- walls with natural finish render or cementitious mortar
- internal cellular cement block walls
- gypsum and anhydrite primed with **Primer G**
- plasterboard
- heated floors
- well cured, dry cementitious screeds and screeds made from special binders (such as **Topcem** and **Mapecem**)

## TECHNICAL CHARACTERISTICS

**Kerabond Plus** is a grey or white-coloured powder made from cement, selected graded sand, synthetic resin and special additives according to a formula developed in the MAPEI research laboratories. When mixed with water, it forms mortar with the following characteristics:

- good workability
- perfect adhesion to all materials normally used in the building industry
- hardens with very little shrinkage

N.B.: When **Kerabond Plus** is mixed with **Isolastic** instead of water, its characteristics are improved to meet the requirements of class C2ES2 adhesive (highly deformable, improved cementitious adhesive with extended open time) according to ISO 13007-1 and EN 12004.

## RECOMMENDATIONS

Do not use **Kerabond Plus**:

- on prefabricated and cast concrete
- on walls and floors subject to large movements or vibration (wood, fibre-cement, etc.)

· on metal surfaces

## APPLICATION PROCEDURE

### Substrate preparation

Substrates on which **Kerabond Plus** is to be applied must be flat, strong, have no crumbling areas, and have no traces of grease, oil, varnish, wax, etc. Cementitious substrates must not shrink after laying tiles. Therefore, in good weather, render must be cured for at least one week per cm of thickness, while cementitious screeds must be cured for at least 28 days, unless they are made from MAPEI special screed binders such as **Mapecem, Mapecem Pronto, Topcem or Topcem Pronto**. If the surface is too hot due to direct sunlight, cool it down with water.

Gypsum substrates and anhydrite screeds must be perfectly dry (maximum residual moisture content 0.3%), hard enough for the final intended use, free of dust, and treated with **Primer G** or **Eco Prim T**.

### Preparation of the mix

Blend **Kerabond Plus** with clean water to obtain a smooth, lump-free mix. Let the mix stand for around 5 minutes and blend again. The amount of water required varies from 27-29 parts per 100 parts in weight, equal to 6.75-7.25 litres of water every 25 kg of **Kerabond Plus**. When blended as described above, the mix lasts for approximately 8 hours.

### Spreading the mix

Apply **Kerabond Plus** on the substrate using a notched trowel. Use a trowel that allows at least 65-70% of the back of the tiles to be wetted for wall tiles or for internal floors with only light traffic and 100% for areas with heavy traffic or for external floors. To guarantee a good bond, apply a thin layer of **Kerabond Plus** on the substrate using the smooth side of the spreader, and then immediately apply a second layer of **Kerabond Plus** to form the thickness required using a notched spreader suitable for the type and size of tiles to be bonded (see "Consumption" section). For external floors and ceramic tiles, or when bonding tiles in swimming pools or water tanks, make sure the adhesive completely covers the back of the tiles.

### Bonding tiles

Tiles do not need to be wet before they are laid. However, if the backs of the tiles are particularly dusty, wash them by dipping them in clean water. When bonding tiles apply firm pressure to guarantee good buttering. The open time for **Kerabond Plus** is approximately 30 minutes in normal weather conditions. When laying conditions are not ideal (direct sunlight, dry wind, high temperatures, etc.), or if the substrate is particularly absorbent, this time may drop to just a few minutes. Therefore, check often to make sure skin does not form on the surface of the adhesive and that it is still fresh. If skin forms spread the adhesive again with the notched trowel. Do not wet the surface of the adhesive if skin forms. Water does not dissolve the skin and impedes correct adhesion. Final adjustment of the tiles must be carried out within 60 minutes of bonding. Tiles and stone bonded with **Kerabond Plus** must be protected from water and rain for at least 24 hours, and from freezing weather and direct sunlight for at least 5 to 7 days.

### Grouting and sealing

Tile joints may be grouted after 4 to 8 hours on walls and after 24 hours on floors. Use a MAPEI cementitious or epoxy grout, available in a wide variety of colours. Seal expansion joints using a suitable MAPEI sealant.

### Spot-bonding insulating materials

When bonding insulating or soundproofing panels, apply spots of **Kerabond Plus** with a trowel or spreader.

## SET TO FOOT TRAFFIC

Floors may be stepped on after approx. 24 hours.

### WAITING TIME BEFORE PUTTING INTO SERVICE

Surfaces may be put into service after approx. 14 days

## CLEANING

Clean tools and containers with water while **Kerabond Plus** is still fresh. Clean the surface of tiles with a damp cloth before the adhesive hardens.

## CONSUMPTION

### Bonding ceramics

- Mosaic and small tiles in general (No. 4 spreader): 2 kg/m<sup>2</sup>
- Normal size tiles (No. 5 spreader): 2.5-3 kg/m<sup>2</sup>
- Large tiles, external floors (No. 6 spreader): 5 kg/m<sup>2</sup>

### Spot-bonding insulating material

- Foam sheets, etc.: approx. 0.5-0.8 kg/m<sup>2</sup>
- Plasterboard and expanded cement panels: approx. 1.5 kg/m<sup>2</sup>

## PACKAGING

Kerabond Plus is available in white or grey in 25 kg paper bags.

## STORAGE

Kerabond Plus may be stored for 12 months in its original packaging in a dry place.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Kerabond Plus contains cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed. It can cause damage to the eyes.

When using the product wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention. For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet.

<b>TECHNICAL DATA (typical values)</b> Complies with the following standards: <ul style="list-style-type: none"><li>– Euronorm EN 12004 (C2E)</li><li>– Euronorm EN 12004 (C2ES1) (if mixed with Isolastic diluted 1:1 with water)</li><li>– Euronorm EN 12004 (C2ES2) (if mixed with neat Isolastic)</li><li>– ISO 13007-1 (C2E) – ISO 13007-1 (C2ES1) (if mixed with Isolastic diluted 1:1 with water)</li><li>– ISO 13007-1 (C2ES2) (if mixed with neat Isolastic)</li></ul>	
<b>PRODUCT IDENTITY</b>	
Consistency:	powder
Colour:	white or grey
Bulk density (kg/m <sup>3</sup> ):	1,300
Dry solids content (%):	100
EMICODE:	EC1 Plus - very low emission
<b>APPLICATION DATA (at +23°C and 50% R.H.)</b>	
Mixing Ratio:	100 parts in weight of <b>Kerabond Plus</b> with 27-29 parts in weight of water
Consistency of the mix:	thick paste
Density of the mix (kg/m <sup>3</sup> ):	1,450
pH of mix:	13
Pot life of mix:	more than 8 hours
Application temperature:	+5°C to +40°C
Open time (according to EN 1346):	> 30 minutes
Adjustment time:	approx. 60 minutes
Grouting joints in wall tiles:	after 4-8 hours
Grouting joints in floor tiles:	after 24 hours

Set to foot traffic:	24 hours
Ready for service:	14 days
<b>FINAL PERFORMANCE</b>	
Adhesion according to EN 1348 (N/mm <sup>2</sup> ) – initial adhesion (after 28 days): – adhesion after application of heat source: – adhesion after immersion in water: – adhesion after freeze-thaw cycles:	1.3 1.1 1.0 1.2
Resistance to alkalis:	excellent
Resistance to oils:	excellent (poor to vegetable oils)
Resistance to solvents:	excellent
Service temperature:	from -30°C to +90°C

**N.B.** The figures for **Kerabond Plus** mixed with **Isolastic** are shown on the **Isolastic** Technical Data Sheet

## IMPORTANT NOTES

*Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that installers satisfy themselves that the product and conditions are suitable for the envisaged application. No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification. The installer should ensure that our latest product data and safety information sheets have been consulted prior to use. Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.com](http://www.mapei.com).*

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