KERABOND PLUS

High-performance cementitious adhesive with extended open time for ceramic, vitrified tiles and stone material

CLASSIFICATION IN COMPLIANCE WITH ISO 13007-1

Kerabond Plus is a C2E class cementitious (C), improved (2), extended open time (E) adhesive.
*The conformity of **Kerabond Plus** is certified by the TT No. 16/12733-1528 and No. 16/12733-1529 certificates issued by the APPLUS LGAI Technological Center, Bellaterra (Spain).*

CLASSIFICATION IN COMPLIANCE WITH IS 15477: 2019

Kerabond Plus is a cementitious adhesives for use with ceramic, mosaic, vitrified and stone tiles.

WHERE TO USE

Bonding all types of ceramic tiles (porcelain, single-fired, terracotta, double-fired, klinker, etc.) vitrified tiles, natural stone and mosaics on internal and external walls and floors. Also suitable for spot bonding insulating materials such as foam polystyrene, foam polyurethane, rock wool, glass wool, soundproofing panels, etc.

Some application examples

Bonding ceramic tiles, vitrified 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** or **Eco Prim T Plus**;
- plasterboard;
- heated floors;
- well cured, dry cementitious screeds and screeds made from special binders (such as **Topcem**).

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.*

RECOMMENDATIONS

Do not use **Kerabond Plus**:

- on prefabricated and pre-cast concrete;
- on walls and floors subject to large movements or vibration (wood, fibre-cement, etc.) (thickness of adhesive above 10 mm);
- on metal surfaces.

APPLICATION PROCEDURE

Preparation of the Substrate

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 **Topcem**. 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 0.5%), hard enough for the final intended use, free of dust and treated with **Primer G** or **Eco Prim T Plus**.

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 25-28 parts per 100 parts in weight, equal to 6.25-7.0 litres of water every 25 kg of **Kerabond Plus grey** and from 26-29 parts per 100 parts in weight, equal to 6.5-7.25 litres of water every 25 kg of **Kerabond Plus** white.
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 trowel and then immediately apply a second layer of **Kerabond Plus** to form the thickness required using a notched trowel 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 a 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 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 LIGHT 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

Approx. 1.2-1.4 kg/m² per mm of thickness.
Coverage depends on the substrate flatness and the application method, ensure all surfaces are smooth, even and free from defects.

Spot-bonding insulating material

— Foam sheets, etc.:	approx. 0.5-0.8 kg/m²
— Plasterboard and expanded cement panels:	approx. 1.5 kg/m²

PACKAGING

Kerabond Plus is available in 25 kg bags.

STORAGE

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

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.in.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

Complies with the following standards:
– ISO 13007-1 (C2E)
– ISO 13007-1 (C2ES1) (if mixed with **Isolastic** diluted 1:1 with water)
– ISO 13007-1 (C2ES2) (if mixed with neat **Isolastic**)
– IS 15477 : 2019 - TYPE 4S1 (If mixed with **Isolastic** Diluted 1:1 with water)
– IS 15477 : 2019 - TYPE 4S2 (If mixed with neat **Isolastic**)

PRODUCT IDENTITY		
Consistency:	powder	
Colour:	white or grey	
Bulk density (kg/m³):	1,300 (± 100)	
Dry solids content (%):	100	
EMICODE:	EC1 Plus - very low emission	
APPLICATION DATA (at +23°C and 50% R.H.)		
Mixing ratio:	100 parts in weight of **Kerabond Plus** grey with 25-28 parts in weight of water 100 parts in weight of **Kerabond Plus** white with 26-29 parts in weight of water	
Consistency of mix:	thick paste	
Density of mix (kg/m³):	1550 (± 100)	
pH of mix:	13	
Pot life of mix:	more than 8 hours	
Application temperature:	+5°C to +40°C	
Open time (according to ISO 13007):	> 30 minutes	
Adjustment time:	approx. 60 minutes	
Grouting joints in wall tiles:	after 4-8 hours	
Grouting joints in floor tiles:	after 24 hours	
Ready for service:	14 days	
FINAL PERFORMANCE		
Adhesion according to ISO 13007 (N/mm²) **– initial adhesion (after 28 days):** **– adhesion after heat:** **– adhesion after water immersion:** **– adhesion after freeze-thaw cycles:**	**According to ISO 13007 (N/mm²) minimum requirement** Minimum 1 Minimum 1 Minimum 1 Minimum 1	**Typical values** 1.55 1.1 1.4 1.5
Resistance to alkalis:	excellent	
Resistance to oils:	excellent (poor for vegetable oils)	
Resistance to solvents:	excellent	

Service temperature:	from -30°C to +90°C

Test Conducted	Requirement as per IS 15477: 2019	Product Performance
Tensile adhesion (N/mm²): **-Dry Condition** **-Wet Condition**	 Min 1.5 Min 1.0	Tests Exceeded
Shear Adhesion (N/mm²): **-Dry Condition** **-Wet Condition** **-Heat Ageing condition**	 1.5 1.0 1.0	Tests Exceeded

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

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.
Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.in

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