KERABOND

Cementitious adhesive for ceramic tiles

CLASSIFICATION IN COMPLIANCE WITH EN 12004

Kerabond is a normal (1) cementitious (C) adhesive of class C1.
*Conformity of **Kerabond** is declared in ITT certificate n° 25070080/Gi (TUM) and n° 25080025/Gi (TUM) issued by the Technische Universität München laboratory (Germany).*

WHERE TO USE

· Indoor and outdoor fixing of ceramic tiles and mosaics of all types on floors, walls and ceilings.
· Spot bonding of insulating materials such as expanded polystyrene, expanded polyurethane, rock and glass wool, Eraclit®, wood-cement and sound-deadening panels, etc.

Some application examples

Paper-faced or mesh-backed and all types of ceramic tiles (porcelain tiles, single fired and klinker tiles, etc.), on:
· conventional renders or cement mortar walls;
· ordinary concrete slabs or reinforced floating slabs, provided they are sufficiently well aged and dry;
· gypsum supports and anhydrite screeds as long as they are first treated with a primer.

TECHNICAL CHARACTERISTICS

Kerabond is a grey or white powder composed of cement, fine-grade, synthetic resins and special admixtures formulated in the MAPEI R&D Laboratories.
Mixed with water, **Kerabond** becomes an easily trowelable mortar with good bonding strength, low slump and high grab so that it can be applied vertically without sagging, even holding heavy tiles.
Kerabond hardens without noticeable shrinkage to become extremely resistant, adhering perfectly to all the conventional materials used in construction.
N.B.: *Mixing **Kerabond** with **Isolastic** in place of water improves the characteristics to meet the requirements of class C2ES2 (improved highly deformable cementitious adhesive with extended open time) according to EN 12004.*

RECOMMENDATIONS

Use **Kerabond** mixed with **Isolastic** in the following cases:
· on foamed concrete walls;
· on pre-cast or cast-concrete structures;
· over underfloor heating installations;
· with large-size tiles;
· for the installation of glass mosaics;
· for the installation of stone materials as long as they are stable and moisture proof.
Do not use **Kerabond** in the following cases:
· on wooden substrates;
· on gypsum board walls;
· on metal, rubber, PVC and linoleum surfaces;

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· for laying tiles which require a layer of adhesive more than 5 mm thick;
· where the surface must be set to light foot traffic rapidly;
· for the installation of non-absorbent tiles (porcelain tiles, single-fired tiles, klinker tiles, etc.) on other non-absorbent wall and floor substrates.

APPLICATION PROCEDURE

Preparing the substrate

The substrates must be cured, mechanically strong, free from loose particles, grease, oils, paint, wax and sufficiently dry.
Cement substrates must not be subject to shrinkage after the installation of the tiles. During spring and summer, renders must be cured for at least one week for every centimetre of thickness and cement screeds must be cured for at least 28 days, unless they have been made with MAPEI special binders for screeds such as **Mapecem**, **Mapecem Pronto**, **Topcem** or with **Topcem Pronto**.
Dampen with water to cool surfaces which have been heated by exposure to sunlight.
Gypsum substrates and anhydrite screeds must be perfectly dry (max. residual moisture 0.5%), sufficiently hard and free of dust. They must be treated with **Primer G** or **Eco Prim T**, while areas subject to high humidity must be treated with **Primer S**.
In general, refer to the relative MAPEI technical documentation regarding substrate preparation before repairing cracks in substrates, consolidating rapid-drying screeds and levelling installation surfaces.

Preparing the mix

Kerabond must be mixed with clean water to obtain an homogenous paste free of lumps; after 5-10 minutes resting, it must be re-mixed. The paste is then ready for use.
The quantity of water to be used is ca. 28-30 parts per 100 parts (by weight) of **Kerabond** grey (equal to ca. 7-7.5 litres of water for 25 kg of powder).
The mix, produced in this way, is workable for at least 8 hours.

Applying the mix

Kerabond is applied with a notched trowel onto the substrate. Choose a trowel that will give a coverage to the back of the tiles of at least 65-70% for walls or for indoor light foot traffic. For heavy traffic and for outdoor application, the coverage must be 100%.
To obtain good adhesion to the substrate the following system is recommended: first apply a thin coat of **Kerabond** using the smooth side of the trowel and immediately after apply the desired thickness of **Kerabond** using the toothed side of the trowel. In particular:
· for mosaics up to 5x5 cm, the MAPEI No. 4 square-notched trowel is recommended;
· for normal ceramic wall tiles, the MAPEI No. 5 V-notched trowel (consumption 2.5-3 kg/m²) is recommended;
· for floors, very irregular surfaces and tiles with high ribs or lugs, the MAPEI No. 6 V-notched trowel (consumption approx. 5 kg/m²) is recommended;
· in the case of outdoor ceramic floor and wall coverings subject to freezing, or in the case of other special uses such as swimming pools reservoirs, sizes larger than 9 dm², floors to be polished after installation or subject to heavy loads, **Kerabond** should be applied evenly to the back of the tile (back-buttering).

Installing the tiles

It is not necessary to wet the tiles before installation; if, however, the backs are very dusty, they should be wiped in clean water.
The tiles are installed under a firm pressure to ensure good contact with the adhesive.
Kerabond's open time in normal temperature and humidity is 20-30 minutes; unfavourable weather conditions (strong sun, drying wind, high temperature), or a highly absorbent substrate may shorten this open time, sometimes quite drastically, to just a few minutes.
For this reason, there must be constant checks to see whether the adhesive has formed a surface skin or is still fresh to the touch.
Should a surface skin have formed, the adhesive should be retrowelled. It is inadvisable to wet the adhesive when it has formed a skin because, instead of dissolving the skin, a non-adhesive film will be formed.
Adjustment of the tiles, if necessary, should be carried out within 60 minutes following installation, after which time, adjustment will become problematic.
Tiling installed with **Kerabond** must not be subject to washout or rain for at least 24 hours and must be protected from frost and direct sun for at least 5-7 days after application.

Spot bonding insulating materials

Spot bonding of sound-deadening or insulating panels should be applied using a float or trowel. The required number and thickness determined by the flatness of the surface and weight of the panels.
In these cases too, the open time must be observed, bearing in mind that a few spots of adhesive on heavy panels may require temporary shoring which should then only be removed after **Kerabond** has begun to set.

Open time still good

Open time expired

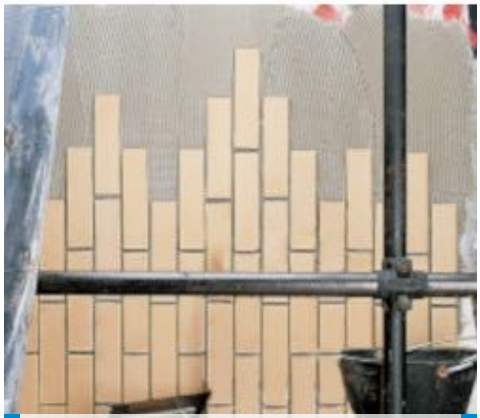
Laying on gypsum treated with Primer G

Installation of mosaic ceramic on wall

Installation of mosaic ceramic on wall

Installation of single-fired tiles on cork

Fixing wall-tiles



Exterior wall fixing

Laying on exterior floor

GROUTING AND SEALING

Wall joints between ceramic tiles can be grouted after 4-8 hours and floor joints can be grouted after 24 hours with the specific MAPEI cementitious or epoxy grouts, available in different colours.
Expansion joints must be sealed with the specific MAPEI sealants.

SET TO LIGHT FOOT TRAFFIC

Floors are set to light foot traffic after approximately 24 hours.

READY FOR USE

Floors are ready for use after approx. 14 days

Cleaning

Tools and hands can be cleaned with plenty of water, while surfaces should be cleaned with a damp cloth; water should be used only in moderate quantities and after a few hours.

CONSUMPTION

Ceramic tiling

Mosaics and small size tiles (trowel No. 4/5): 2-3 kg/m².
Normal size tiles (trowel No. 5/6): 4-5 kg/m².
Large sizes, floors, exteriors (trowel No. 6/10): > 6 kg/m² and over.

Spot-bonding insulating materials

Foam materials, etc.: approx. 0.5-0.8 kg/m².
Gypsum wallboard, foamed concrete: approx. 1.5 kg/m².

PACKAGING

Kerabond is supplied in white and grey in:
· 25 kg paper bags;
· 4x5 kg carton alupack boxes.

STORAGE

Kerabond in 25 kg bags can be stored for 12 months, while the maximum recommended storage time for 5 kg Alupack bags is 24 months in a normal environment and original packaging.
The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTION FOR PREPARATION AND INSTALLATION

Kerabond contains cement that when in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. In case of contact with 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 Material Safety Data Sheet.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values) **In compliance with:** · **European EN 12004 as C1** · **European EN 12004 as C2ES2 (if mixed with Isolastic)** · **ISO 13007-1 as C1** · **ISO 13007-1 as C2ES2 (if mixed with Isolastic)**	
PRODUCT IDENTITY	
Consistency:	powder
Colour:	white or grey
Bulk density (kg/m³):	1300
Dry solids content (%):	100
EMICODE:	EC1 R Plus - very low emissions
APPLICATION DATA (at +23°C and 50% R.H.)	
Mix ratio:	100 parts **Kerabond** with 28-30 parts by weight of water
Consistency of mix:	very pasty

Density of mix (kg/m³):	1450
pH of mix:	13
Pot life:	over 8 hours
Application temperature:	from +5°C to +40°C
Open time (according to EN 1346):	> 20 minutes
Adjustability time:	approx. 60 minutes
Wall grouting:	after 4-8 hours
Floor grouting:	after 24 hours
Set to light foot traffic:	24 hours
Ready for use:	14 days
FINAL PERFORMANCE	
Adhesion strength according to EN 1348 (N/mm²): **– initial adhesion strength (after 28 days):** **– adhesion strength after heat:** **– adhesion strength after water immersion:** **– adhesion strength after freeze-thaw cycles:**	 1.8 0.9 1.4 1.7
Resistance to alkalis:	excellent
Resistance to oils:	excellent (poor for vegetable oils)
Resistance to solvents:	excellent
Temperature resistance after final cure:	from -30°C to +90°C

N.B. *The technical data of **Kerabond** mixed with **Isolastic** are on the latter's 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.com

LEGAL NOTICE

All relevant references for the product are available upon request and from www.mapei.com

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