KERABOND

Cementitious adhesive for ceramic tiles.

EN 12004 C1 EC1 PLUS

BENEFITS AND FEATURES

- Good adhesion
- Easy workability
- Suitable for laying ceramic tiles and ceramic mosaics on ordinary substrates
- Mixed with **Isolastic**, instead of water, it improves its performance characteristics up to class C2ES2

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 and walls.

Some application examples

Paper-faced or mesh-backed and all types of ceramic tiles (porcelain tiles, single fired and klinker tiles, etc.), on the following substrates:

- conventional renders or cement mortar walls;
- cement screeds, made with products of damp earth consistency or self-levelling;
- gypsum substrates and anhydrite screeds as long as they are dry and first treated with a primer, such as **Primer G** or **Eco Prim T Plus Zero**.

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.

Kerabond has very low emission of VOC (Volatile Organic Compounds) for installers' and final users' health and safety and is certified as EC1 Plus.

Kerabond contributes to obtaining important LEED credits.

MAPEI

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.

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 wood and wood conglomerates;
- on gypsum board walls;
- on metal, rubber, PVC and linoleum surfaces;
- 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.
- on floors and coverings that are subject to strong movement or vibrations.

Never add water to the mix once it has started to set.

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% for traditional / non-heating screeds), mechanically strong and free of dust. They must be treated with primers such as **Primer G** or **Eco Prim T Plus Zero.**

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 using an electric mixer to obtain an homogenous paste free of lumps; after 5-10 minutes resting, stir again.

Use approx. 24 -26 parts of water per 100 parts by weight of **Kerabond** grey, equivalent to 6-6.5 litres of water per 25kg bag of grey powder and 25 -27 parts of water per 100 parts by weight of **Kerabond** white, equivalent to 6.3-6.8 litres of water per 25kg bag of white powder.

The mix, produced in this way, is workable for at least 8 hours.

Applying the mix

Apply **Kerabond** to the substrate using a notched trowel. Choose a trowel that allows proper wetting of the back of the tiles.

To achieve good adhesion, spread a thin layer of **Kerabond** on the substrate using the smooth side of the trowel and immediately apply the desired thickness of **Kerabond** using the appropriate notched trowel, depending on the type and size of the tiles.

In case of very absorbent substrates and and in the presence of high temperatures, it is advisable to dampen the substrate before spreading **Kerabond** in order to prolong the open time of the adhesive.

Use the double-buttering technique, applying the adhesive (mixed with **Isolastic** when class C2ES2 is required) also on the back of the tiles to ensure complete wetting. This technique is necessary when laying ceramic floor and wall tiles with a side length greater than 30 cm outdoors, when laying large-format tiles with a side length greater than 60 cm, on underfloor heating systems, on floors to be sanded on site or subject to heavy loads, or when applying in swimming pools and water tanks.

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 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.

Continuously check that the adhesive applied has not formed a skin on the surface and is still 'fresh'; if not, go over the adhesive again with the notched trowel to reactivate the open time or, if it has already started to set, remove it and apply a new layer of fresh adhesive.

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.

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. When laying tiles, in order to maintain the correct joint size and reduce any differences in height between adjacent tiles, it is advisable to use the levelling systems from the **MapeLevel** range between one tile and another.

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.

Create expansion joints respecting the structural, control and perimeter joints present in the substrate.
Expansion joints must be sealed with the appropriate MAPEI sealants.
If necessary, clean, maintain and protect the surfaces using the appropriate products from the **UltraCare** line.

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 approximately 14 days

CLEANING

Tools and containers can be cleaned with plenty of water while **Kerabond** is still fresh. Surfaces should be cleaned with a damp cloth before the product hardens.

CONSUMPTION

2-5 kg/m^2.

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.

SAFETY INSTRUCTION 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.com.

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:	1300 kg/m^3
Dry solids content:	100%
EMICODE:	EC1 Plus - very low emissions

APPLICATION DATA (at +23°C and 50% R.H.)	
Mix ratio:	100 parts **Kerabond** grey with 24-26 parts of water by weight 100 parts **Kerabond** white with 25-27 parts of water by weight
Consistency of mix:	very pasty
Density of mix:	1450 kg/m^3
pH of mix:	13
Pot life:	over 8 hours
Application temperature:	from +5°C to +40°C

Open time:	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:	
– initial adhesion strength (after 28 days):	1.8 N/mm²
– adhesion strength after heat:	0.9 N/mm²
– adhesion strength after water immersion:	1.4 N/mm²
– adhesion strength after freeze-thaw cycles:	1.7 N/mm²
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

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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