



Kerabond T-R

Non-slip cementitious adhesive for porcelain and ceramic tiles



CLASSIFICATION IN COMPLIANCE WITH ISO 13007-1

Kerabond T-R is a normal (1) slip-resistant (T) cementitious (C) adhesive with high bond strength and no vertical slip for ceramic, porcelain and non-moisture sensitive natural stone tiles. Classified as C1T.

WHERE TO USE

- Indoor and outdoor adhesive for bonding absorbant ceramic tiles (double fired), glazed ceramic tiles (single fired), decorative ceramic tiles made from heat treated clay (cotto), etc. and for mosaics made from any kind of ceramic tiles mounted on floors, walls or ceilings.
- For bonding of porcelain tiles of up to 60 x 60cm (3600 cm²) on indoor and absorbant supports.
- Spot bonding of insulating materials such as expanded or extruded polystyrene sheets, rock and glass wool, Heraclit[®] and sound-deadening panels, etc.

Some application examples

- Bonding of paper-faced or mesh-backed and all types of ceramic, porcelain, mosaic, single fired and klinker tiles, etc. on:
- conventional renders or cement mortar walls;
 - ordinary concrete based screed or reinforced floating screeds provided they are well aged and dry;
 - gypsum wallboards, mechanically well fixed and treated beforehand with **Primer G**.
 - gypsum layers or anhydrite screeds, only if they are abraded beforehand and treated with acrylic **Primer G**.

TECHNICAL CHARACTERISTICS

Kerabond T-R is a grey powder composed of cement, fine-grade, synthetic resins and special admixtures formulated in the MAPEI R&D Laboratories. Mixed with water, **Kerabond T-R** 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 T-R hardens without noticeable shrinkage to become extremely resistant, adhering perfectly to all the conventional materials used in construction.

N.B.: *Mixing **Kerabond T-R** 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 ISO 13007-1.*

RECOMMENDATIONS

Use **Kerabond T-R** mixed with **Isolastic** in the following cases:

- on support layers waterproofed with **Mapelastic**, **Mapelastic Smart** or **Mapegum WPS**; for swimming pools, balconies, terraces, facades etc.
- on foamed concrete walls;
- on pre-cast or cast-concrete structures;
- over underfloor heating installations;
- with large-size porcelain or ceramic tiles with a thickness of only 3-6mm. (Please consult with Technical Services of Mapei South Africa).
- for the installation of glass mosaics;
- for the installation of stone materials as long as they are stable and moisture proof;
- for the installation of porcelain or ceramic tiles over existing tiles.

Do not use **Kerabond T-R** in the following cases:

- on wooden substrates;
- 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;

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- 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 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, sufficiently hard and free from dust. It is absolutely essential that the surface is abraded and then treated with **Primer G**. In indoor applications the non-absorbent surfaces, glazed floor tiles, porcelain tiles, cement based tiles, have to be degreased and then apply the fillerized primer, **Eco Prim Grip**.

Preparing the mix

Kerabond T-R must be mixed with clean water to obtain a homogenous paste free of lumps; after 5-10 minutes resting, it must be re-mixed. The paste is then ready for use. The mixing ratio is 5 litres of water per 20kg bag of **Kerabond T-R** grey. Always refer to the quantity of mixing water prescribed on the packaging.

Preparing the adhesive **Kerabond T-R** with **Isolastic** is done in accordance with the above and the class / requests demanded from the adhesive. As such, the latex quantities are as follows:

Kerabond T-R with 3 litres of water and 3 litres of **Isolastic** → C2ES1, flexible and improved adhesive with extended open time.

Kerabond T-R with 6 litres of **Isolastic** → C2ES2, very flexible and improved adhesive with extended open time. The mix, produced in this way, is workable for at least 8 hours.

Applying the mix

Kerabond T-R 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 T-R** using the smooth side of the trowel and immediately after apply the desired thickness of **Kerabond T-R** 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 T-R** 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 T-R'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 45 minutes following installation, after which time, adjustment will become problematic.

Tiling installed with **Kerabond T-R** 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 T-R** has begun to set.

GROUTING AND SEALING

Wall joints between ceramic tiles can be grouted after 8 hours and floor joints can be grouted after 12 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 12 hours.

READY FOR USE

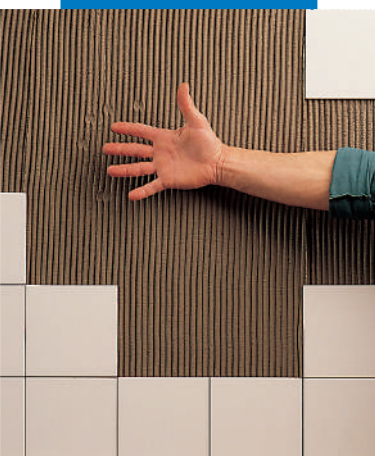
Floors are ready for use after approx. 14 days

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.



Open time still good



Open time expired



Laying on gypsum treated with Primer G

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:	grey
Bulk density (kg/m ³):	1300
Dry solids content (%):	100
EMICODE:	EC1 R Plus - very low emissions

APPLICATION DATA (at +23°C and 50% R.H.)

Mix ratio:	5 litres of water per 20kg of Kerabond T-R
Consistency of mix:	very pasty
Density of mix (kg/m ³):	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. 45 minutes
Wall grouting:	after 8 hours
Floor grouting:	after 12 hours
Set to light foot traffic:	12 hours
Ready for use:	14 days

FINAL PERFORMANCES

Adhesion strength according to EN 1348 (N/mm ²)	
- initial adhesion strength (after 28 days):	1.6
- adhesion strength after heat:	0.8
- adhesion strength after water immersion:	1.0
- adhesion strength after freeze-thaw cycles:	1.0
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



Installation of mosaic ceramic on wall



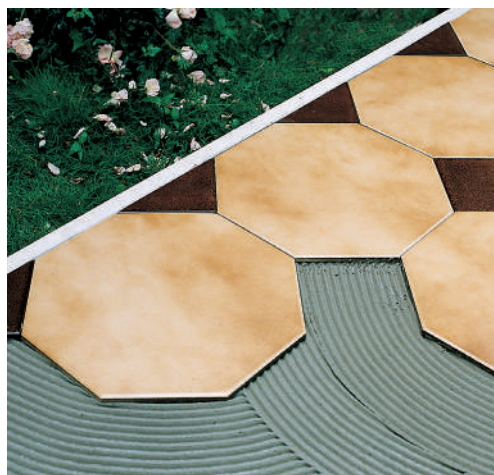
Installation of mosaic ceramic on wall



Installation of single-fired tiles on cork

N.B. The technical data of **Kerabond T-R** mixed with **Isolastic** are on the latter's technical data sheet.

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Laying on exterior floor

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 T-R is supplied in grey in 20 kg paper bags.

STORAGE

12 months when stored in a normal environment and original packaging.

SAFETY INSTRUCTION FOR PREPARATION AND INSTALLATION

Kerabond T-R is an irritant as it contains cement that when comes into contact with sweat or other bodily fluids causes an irritant alkaline reaction and allergic reactions to those predisposed. 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.

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.



This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gesellschaft Emissionskontrollierte Verlegwerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.



Our Commitment To The Environment
MAPEI products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

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



Exterior wall fixing



Fixing wall-tiles



BUILDING THE FUTURE