

# **CLASSIFICATION IN COMPLIANCE WITH** EN 12004

**Kerabond T** is a normal (1) slip-resistant (T) cementitious (C) adhesive of class C1T.

**Kerabond T** is CE marked, as declared in **ITT** certificates **No. 25050176-1/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, Heraclit<sup>®</sup> wood-cement and sound-deadening panels etc.

#### Some application examples

Paper-faced or mesh-backed mosaics and all types of ceramic tiles (quarry 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 T** is a grey or white powder composed of cement, fine-grade, synthetic resins and special additives formulated in the MAPEI Research and Development Laboratories.

Mixed with water, **Kerabond T** becomes an easily trowellable mortar with good bonding strength, low slump and high grab so that it can be applied vertically without sagging, even holding heavy tiles. It is possible to install from the top towards the bottom without using spacer pegs.

**Kerabond T** hardens without noticeable shrinkage to become extremely resistant, adhering perfectly to all the conventional materials used in construction.

**N.B.:** Mixing **Kerabond T** with **Isolastic** in place of water improves the characteristics to meet the requirements of class C2 (improved cementitious adhesive) according to EN 12004 and those of class S2 (highly deformable adhesive) according to the European standard EN 12002.

#### **RECOMMENDATIONS**

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

- on foamed concrete walls;
- on pre-cast or cast-concrete structures;
- over underfloor heating installations;

# Kerabond T



Fixing ceramic tiles on walls working from the top to the bottom

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- 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 T** 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;
- where the surface must be set to light foot traffic rapidly;
- for the installation of non-absorbent tiles (quarry 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, sufficiently hard and free from dust. It is absolutely essential that the surface is abraded and then treated with **Primer G** or **Mapeprim SP**. Areas subject to high humidity should be primed with **Primer S**.

#### **Preparing the mix**

**Kerabond T** must be mixed with clean water to obtain an homogenous lump free paste; 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 24-26 parts per 100 parts (by weight) of **Kerabond T** (equal to 6-6.5 litres of water for 25 kg of powder).

Always refer to the quantity of mixing water prescribed on the packaging.

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

#### **Applying the mix**

Kerabond T 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, total immersion 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** using the smooth side of the trowel and immediately after apply the desired thickness of **Kerabond T** 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 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 normally installed under a firm pressure to ensure good contact with the adhesive.

**Kerabond T**'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** must not be subject to washout or rain for at least 24 hours and must be protected from freezing and direct sun for at least 5-7 days after application.

# **TECHNICAL DATA (typical values)**

In compliance with:

- European EN 12004 as C1T
   ISO 13007-1 as C1T
   European EN 12004 as C2 (if mixed with Isolastic)
   European EN 12002 as S2 (if mixed with Isolastic)
   ISO 13007-1 as C2S2 (if mixed with Isolastic)
   American ANSI A 118.1 1999
   Canadian 71 GP 30 M type 2

PRODUCT IDENTITY	
Type:	powder
Colour:	white or grey
Bulk density (kg/m³):	1300
Dry solids content (%):	100
Storage:	12 months in a dry place in original packaging
Hazard classification according to EC 1999/45:	irritant. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	3824 50 90
APPLICATION DATA (at +23°C and 50% R.H.)	
Mix ratio:	100 parts <b>Kerabond T</b> white with 24-26 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. 45 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 PERFORMANCES	
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:	1.4 0.8 0.9 1.2
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 T mixed with Isolastic are on the latter's technical data sheet.



Hotel Radison -Bükkfürdő - Hungary



Alliance insurance offices - Munich -Germany



Kingcross Shopping Centre - Zagabria -Croatia





#### **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 the **Kerabond T** has begun to

#### **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): 2 kg/m<sup>2</sup>

Normal size tiles

(trowel No. 5): 2.5-3 kg/m<sup>2</sup>

Large sizes, floors,

exteriors (trowel No. 6): 4 kg/m² and over

#### **Spot-bonding insulating materials**

Foam materials, etc.: approx. 0.5-0.8 kg/m<sup>2</sup>

Gypsum wallboard,

foamed concrete: approx. 1.5 kg/m<sup>2</sup>

#### **PACKAGING**

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

#### STORAGE

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

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

#### **SAFETY INSTRUCTION FOR** PREPARATION AND INSTALLATION

**Kerabond T** contains cement that when in contact with sweat or other bodily fluids, produces an irritant alkaline reaction and allergic reactions in those who are predisposed. Wear protective clothing, gloves and eye/face protection. For further information refer to the safety data

PRODUCT FOR PROFESSIONAL USE.

#### WARNING

Although the technical details and recommendations contained in this 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 applications: 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.



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



Our Commitment To The Environment More than 150 MAPEI products assist Project

Designers and Contractors create innovative LEED 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

