



# Keraset

## Cementitious adhesive for ceramic tiles



### CLASSIFICATION IN COMPLIANCE WITH EN 12004

Keraset is a normal (1) cementitious (C) adhesive of class C1.

Conformity of **Keraset** is declared in **ITT** certificate n° **71230101.101 (SFV)** issued by the *Säurefliesner-Vereinigung e.V. Grossburgwedel laboratory (Germany)* and n° **25080231/Gi (TUM)** issued by the *Technische Universität München laboratory (Germany)* and in certificates **ITT n° 2008-B-2749/01** and **2008-B-2749/04** issued by the *MPA Dresden Institute (Germany)*.

### WHERE TO USE

Internal and external bonding of ceramic tiles and mosaics, single-fired and double-fired tiles for floors, walls and ceilings.

### Some application examples

Bonding of ceramic mosaics on paper or mesh, absorbent single-fired or double-fired ceramic tiles on:

- traditional render or cement mortar;
- ordinary or floating reinforced, cementitious screeds provided they are sufficiently cured and dry.

### TECHNICAL CHARACTERISTICS

**Keraset** is a grey or white powder composed of cement, sands of selected granulometry, synthetic resins and special admixtures according to a formula developed in MAPEI's Research Laboratories.

**Keraset**, mixed with water, becomes an easily workable mortar, that can be applied even vertically without slumping and without letting the tiles slip.

**Keraset** hardens without appreciable shrinkage attaining a good resistance, adhering perfectly to all materials normally used in the building industry.

### RECOMMENDATIONS

Do not use **Keraset**:

- on wood and wooden mixtures;
- on gypsum board or light weight concrete walls;
- on metal, rubber, PVC and linoleum surfaces;
- for the installation of glass mosaics;
- for the installation of tiles that require an adhesive thickness greater than 5 mm;
- with large size tiles;
- on pre-cast concrete or subject to strong movements;
- on heated or existing floors;
- in cases where the surface needs to be set to light traffic quickly.

### APPLICATION PROCEDURE

#### Preparing the substrate

The substrates must be cured, mechanically strong, free of loose particles, grease, oil, paint, wax and sufficiently dry.

Cement substrates must not be subject to shrinkage after tile installation. In mild weather, renders must have cured at least one week for each centimetre of thickness and cementitious screeds must have cured 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**.

Cool down with water surfaces that could become too hot due to exposure to sun light.

Gypsum substrates and anhydrite screeds must be perfectly dry, sufficiently hard and free of dust. It is absolutely essential that they are treated with **Primer G** or **Mapeprim SP**. Areas subject to high humidity should be primed with **Primer S**.

### Preparing the mix

**Keraset** must be mixed with clean water to obtain an homogenous paste free of lumps; after some minutes of resting, it must be re-mixed and the paste is then ready for use.

The quantity of water to be used is 23-25 parts per 100 parts (by weight) equal to 5.75-6.25 litres of water for 25 kg of **Keraset**.

The mix, produced in this way, is workable for at least 6 hours.

### Applying the mix

**Keraset** 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 internal light foot traffic. For heavy traffic and for external application, the coverage must be 100%.

To obtain good adhesion to the substrate the following system is recommended: first apply a thin coat of **Keraset** using the smooth side of the trowel and immediately afterwards apply the desired thickness of **Keraset** using the toothed side of the trowel. In particular:

- for mosaics up to 5x5 cm the use of MAPEI No. 4 square toothed trowel is recommended (consumption 2 kg/m<sup>2</sup>);
- for normal ceramic coverings the use of MAPEI No. 5 notched trowel (consumption 2.5-3 kg/m<sup>2</sup>) is recommended;
- for substrates that have an irregular surface or tiles with a very rough back, the use of MAPEI No. 6 or notched toothed trowel (consumption approx. 5 kg/m<sup>2</sup>) is recommended;
- in the case of external ceramic floor and wall tiles subject to frost or in difficult applications, **Keraset** must also be applied on the back of the tiles (back-buttering method).

### Installing the tiles

It is not necessary to wet the tiles before installation; only in the case of very dusty backs washing is recommended, by quickly immersing them in clean water. The tiles must be installed in the normal way, placing them firmly to ensure good contact with the

adhesive. The open time of **Keraset** in normal conditions of temperature and humidity, is 20 minutes; unfavourable environmental conditions (strong sun light, drying wind, high temperature as well as a very absorbent substrate), could drastically reduce this time to a few minutes.

Therefore one must constantly check that the adhesive has not formed a superficial skin and is still "fresh"; where there is a formation of a superficial skin the adhesive must be re-applied with the notched trowel.

Wetting the adhesive after it has produced the skin is not recommended because the water forms an anti-adhesive film instead of dissolving it.

The "adjustability" of the tiles must be carried out within 45 minutes after installation.

Tiles installed with **Keraset** must not be subject to running water or rain for at least 24 hours and must be protected from freezing weather and strong sun light for at least 5-7 days after installation.

### GROUTING AND SEALING

Wall joints between the 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 approx. 24 hours.

### READY FOR USE

Surfaces are ready for use after approx. 14 days.

### Cleaning

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

### CONSUMPTION

#### Bonding of ceramic mosaics:

- small size tiles in general (trowel No. 4): approx. 2 kg/m<sup>2</sup>;
- normal size tiles (trowel No. 5): 2.5-3 kg/m<sup>2</sup>;
- external floor and wall coverings (trowel No. 6): approx. 5 kg/m<sup>2</sup> and over.

### PACKAGING

**Keraset** is supplied in white and grey 25 kg paper bags.

### STORAGE

12 months when stored in a dry place. The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH) - All. XVII, item 47.

## TECHNICAL DATA (typical values)

In compliance with:

– European EN 12004 such as C1  
– American ANSI A 118.1 – 1999

### PRODUCT IDENTITY

Consistency:	powder
Colour:	white or grey
Bulk density (kg/m <sup>3</sup> ):	1300
Dry solids content (%):	100
EMICODE:	EC1 R Plus - very low emission

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

Mix ratio:	100 parts <b>Keraset</b> with 23-25 parts of water by weight
Consistency of mix:	pasty
Density of mix (kg/m <sup>3</sup> ):	1400
pH of mix:	over 12
Pot life:	6-8 hours
Application temperature:	from +5°C to +35°C
Open time (according to EN 1346):	> 20 minutes
Adjustability time:	approx. 45 minutes
Wall grouting:	after 3-6 hours depending on absorbency
Floor grouting:	after 24 hours
Set to light foot traffic:	24 hours
Ready for use:	14 days

### FINAL PERFORMANCES

Adhesion according to EN 1348 (N/mm <sup>2</sup> ):	
– initial adhesion (after 28 days):	1.0
– adhesion after heating:	0.60
– adhesion after water immersion:	0.80
– adhesion after freeze-thaw cycles:	0.90
Resistance to damp:	excellent
Resistance to ageing:	excellent
Resistance to solvents and oils:	excellent
Resistance to acids and alkalis:	poor
Resistance to temperature:	from -30°C to +90°C

# Keraset



## SAFETY INSTRUCTION FOR PREPARATION AND INSTALLATION

**Keraset** is irritant, it 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.

In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention. It is recommended to use protective gloves and goggles.

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](http://www.mapei.com)**



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 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**  
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](http://www.mapei.com)**



**BUILDING THE FUTURE**