



Keraset

Cement based adhesive for ceramic tiles



CLASSIFICATION IN COMPLIANCE WITH ISO 13007-1

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

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 paper-faced or mesh-backed ceramic mosaics, absorbent single-fired or double-fired ceramic tiles on following typical substrates:

- traditional render or cement mortar;
- gypsum board and anhydrite surfaces after having first applied **Primer G**;
- 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 additives according to a formula developed in MAPEI's Research and Development Laboratories.

Keraset, mixed with water, becomes an easily workable mortar that can be also applied vertically without slumping and without tile slippage.

Keraset hardens without appreciable shrinkage

attaining a good resistance, adhering adequately to all materials normally used in the building industry.

RECOMMENDATIONS

Do not use Keraset:

- on wood and wooden composites;
- on gypsum board or lightweight concrete walls without the correct preparation and treatment;
- on metal, rubber, PVC and linoleum surfaces;
- for the installation of glass mosaics;
- for the installation of tiles that require a nominal adhesive thickness greater than 5 mm;
- large format tiles;
- on pre-cast concrete or surfaces subject to excessive 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 substrate must be adequately cured, mechanically sound, free of loose particles, grease, oil, paint, wax and other deleterious material or surface contamination and should be sufficiently dry.

Cement substrates must not be subject to shrinkage

after tile installation. In mild weather, renders must have cured at least 1 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 **Mapcem**, **Mapcem Pronto**, **Topcem** or with **Topcem Pronto**.

Surfaces that could become too hot due to exposure to sunlight, consider shading or cooling down with potable water. 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 moisture content should be primed with **Primer S**.

Preparing the mix

Keraset must be mixed with clean water to obtain an homogenous paste free of lumps; leave to rest approximately 5 minutes and re-mix, the paste is then ready to use. The quantity of water to be used is 23-25 parts per 100 parts (by weight) equal to 4.6-5 litres of water for 20 kg of **Keraset** grey and 24-26 parts per 100 parts (by weight) equal to 4.8-5.2 litres of water for 20 kg of **Keraset** white.

The mix, produced in this way, is workable for at least 6 hours (at +25°C).

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/m²);
- for normal ceramic coverings the use of MAPEI No. 5 notched trowel (consumption 2.5-3 kg/m²) 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 5 kg/m²) is recommended;
- in the case of external ceramic floor and wall tiles subject to frost or in difficult applications, the **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 sunlight, drying wind, high temperature as well as a highly 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 reworked 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 (at +23°C) 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 frost and strong sunlight for at least 5-7 days after installation.

Cleaning

Tools and containers should be cleaned with plenty of water while **Keraset** is still fresh. Surfaces should be cleaned with a damp cloth, before the adhesive dries.

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.

Grout with the appropriate MAPEI grout (see Technical Data Sheets of grouts for details).

PROTECTION

Protect floors from foot traffic for at least 72 hours after installation. Stepping boards may be used after 24 hours when occasional stepping on the floor is unavoidable.

SET TO LIGHT FOOT TRAFFIC

Floors are set to withstand light foot traffic after approx. 24 hours.

READY FOR USE

Surfaces are ready for normal use after approx. 14 days.

CONSUMPTION

Bonding of ceramic mosaics

small size tiles in general
(trowel No. 4; size 4x4 mm): approx. 2 kg/m²;

normal size tiles

(trowel No. 5; size 5x5 mm): 2.5-3 kg/m²;

external floor and wall
coverings (trowel No. 6;
size 6x6 mm):

approx. 5 kg/m².

PACKAGING

Keraset is supplied in white and grey 20 kg bags.

STORAGE

When stored in dry conditions in the original, unopened bags, **Keraset** has a shelf life of

TECHNICAL DATA (typical values)

In compliance with:

– International ISO 13007-1 as class C1
– American ANSI A 118.1

PRODUCT IDENTITY

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

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

Mix ratio:	100 parts Keraset grey with 23-25 parts water by weight 100 parts Keraset white with 24-26 parts water by weight
Consistency of mix:	pasty
Density of mix (kg/m ³):	1400
pH of mix:	over 12
Pot life:	6/8 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 to 8 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 ISO 13007-1 (N/mm ²):	
– 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
VOC:	0 g/l

Keraset

12 months. If stored at high temperature and or high humidity conditions the shelf life may be reduced.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Keraset is an irritant containing cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed. When applying the product, use protective gloves and goggles and take the usual precautions for handling chemicals.

If the product comes in contact with the 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 our latest version of the Material Safety Data Sheet.

IMPORTANT NOTES

Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that installers satisfy themselves that the product and conditions are suitable for the envisaged

application. No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification. The installer should ensure that our latest product data and safety information sheets have been consulted prior to use.

Please refer to the current version of the Technical Data Sheet, available from our website 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) in compliance with the U.S. Green Building Council or other environmental/sustainable certified projects.

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



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