

KERASET

Cementitious adhesive for ceramic tiles



CLASSIFICATION IN COMPLIANCE WITH ISO 13007-1 AND EN 12004

Keraset is a normal (I) 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 the following typical substrates:

- traditional render or cement mortar.
- 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. It 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

Preparation of 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 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 centimeter 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**.

Surfaces that could become too hot due to exposure to sunlight, consider shading or cooling down with potable water.

Anhydrite screeds must be perfectly dry, sufficiently hard, and free of dust. It is absolutely essential that they are treated with **Primer G** or **Eco Prim T Plus**. Areas subject to high moisture content should be primed with **Primer S**.

Preparation of the mix

Keraset must be mixed with clean water to obtain a homogenous paste free of lumps; leave to rest for approximately 5 minutes and re-mix, the paste is then ready to use. The quantity of water to be used is 24-26 parts per 100 parts (by weight) equal to 6-6.5 liters of water for 25 kg of **Keraset**. The mix, produced in this way, is workable for at least 6 hours (at +25°C).

Application of the mix

Keraset is applied with a notched trowel onto the substrate. Choose a trowel that will give 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 afterward 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 is recommended (consumption 2.5-3 kg/m²).
- for substrates that have an irregular surface or tiles with a very rough back, the use of MAPEI No. 6 or notched toothed trowel is recommended (consumption 5 kg/m²).
- 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).

Installation of 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; unfavorable 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 superficial skin and is still "fresh"; where there is a formation of 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): approx. 2.5-3 kg/m²

external floor and wall coverings

(trowel No. 6; size 6x6 mm): approx. 5 kg/m²

PACKAGING

Keraset white and grey are available in 25 kg paper bags.

STORAGE

When stored in dry conditions in the original, unopened bags, **Keraset** has a shelf life of 12 months. If stored at high temperature and/or high humidity conditions the shelf life may be reduced.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

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.ae.

TECHNICAL DATA (typical values)

Complies with:
International ISO 13007-1 (C1)
Euronorm EN 12004 (C1)
American ANSI A 118.1

PRODUCT IDENTIFICATION

Consistency:	powder
Colour:	white or grey
Bulk density (kg/m ³):	1300
Dry solids content (%):	100

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

Mixing ratio:	100 parts Keraset with 24-26 parts water by weight
Consistency of mix:	pasty
Density of the mix (kg/m ³):	1688
pH of mix:	over 12
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 PERFORMANCE

Bond strength:	
– initial (after 28 days):	Grey: 1.00 N/mm ² ; White: 1.40 N/mm ²
– after application of heat source:	0.70 N/mm ²
– after water immersion:	0.60 N/mm ²
– adhesion after freeze-thaw cycles:	0.90 N/mm ²
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

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.ae.

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into other project-related documents, 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.ae.

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

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

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108-1-2024 (UAE)

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