

KERASET

Cement based adhesive for ceramic and vitrified tiles



CLASSIFICATION IN COMPLIANCE WITH ISO 13007-1

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

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

CLASSIFICATION IN COMPLIANCE WITH IS 15477: 2019

Keraset is a normal cementitious adhesive of Type 2.

WHERE TO USE

Internal walls and floors, and external floors bonding of ceramic tiles and mosaics, tile on tile application, vitrified tiles, single-fired and double-fired tiles.

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 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 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 lightweight 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 10 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

Preparation of the substrate

The substrate must be cured, mechanically strong, free of loose particles, grease, oils, 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 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**.

Cool down with water surfaces that could become too hot due to exposure to sunlight. 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 **Eco Prim T Plus**. Areas subject to high humidity should be primed with **Primer S**.

Preparing the mix

Keraset must be mixed with clean water to obtain a 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 liters of water for 25 kg of **Keraset**. 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 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 applications, 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 or vitrified 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 10 notched 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 adhesives. 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 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 frost and strong sunlight 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 or vitrified mosaics:

– small size tiles in general (trowel No. 4):	approx. 2 kg/m ² ;
– normal size tiles (trowel No. 5):	2.5-3 kg/m ² ;
– external floor and wall coverings (trowel No. 6/10):	approx. 5-6.5 kg/m ² and over.

PACKAGING

Keraset is supplied in white and grey in 25 kg polypropylene bags.

STORAGE

12 months when stored in a dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

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.com.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

In compliance with:

- European EN 12004 such as C1
- ISO 13007-1 as class C1
- American ANSI A 118.1
- IS 15477: 2019 Type 2

PRODUCT IDENTITY

Consistency:	powder
Colour:	grey or white
Bulk density (kg/m ³):	1,300
Dry solids content (%):	100
EMICODE:	Ec1 Plus – very low emission

APPLICATION DATA (at +20°C - 50% R.H.)

Mix ratio:	100 parts Keraset with 23-25 parts 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 +35°C
Open time (according to EN 1346):	20 minutes
Adjustability time:	approx. 45 minutes

Wall grouting:	after 3/6 hours depending on the 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 ²)	
- initial adhesion (after 28 days):	1.0
- adhesion after heat:	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

TEST CONDUCTED

	TYPE 2	
Tensile adhesion (N/mm ²):		Tests exceeded
-Dry Condition	Min 1.0	
-Wet Condition	Min 1.0	
Shear Adhesion (N/mm ²):		
-Dry Condition	1.25	
-Wet Condition	1.0	
-Heat Ageing condition	1.0	

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.

108-11-2021 (GB X IN)

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