



Keraquick S1



High-performance, deformable, fast setting cementitious adhesive with no vertical slip, very low emission level of organic volatile compounds, for ceramic tiles and stone material



CLASSIFICATION IN COMPLIANCE WITH EN 12004

Keraquick S1 is an improved (2) fast setting (F) cementitious (C), slip resistant (T) and deformable adhesive classified as C2FT S1.

Conformity of **Keraquick S1** is declared in **ITT certificates no. 25070276-3/Gi (TUM), no. 25080059-3/Gi (TUM) and no. 25080063/Gi (TUM)** issued by the Technische Universität München laboratory (Germany).

WHERE TO USE

Bonding to cement screeds, cement-based renders, cured concrete, existing floors internally and externally. For the installation of:

- ceramic and mosaic tiles of every type and stone materials that are not extremely sensitive to moisture;
- insulating materials such as expanded polystyrene and polyurethane, sound-deadening panels, gypsum board, glass and rock wool, Eraclit®, foamed-concrete blocks, etc.

Some application examples

- Repairs in heavily trafficked areas and when surfaces need to be put into service rapidly, such as public premises, motorway services, pedestrian passages, supermarkets, showrooms.
- Rapid installation or repairs in swimming pools, industrial plants (breweries, wine-cellars, dairies, etc.), refrigeration units.
- Rapid repair work in bathrooms, showers, kitchens, balconies, terraces.
- Installing non-absorbent flooring over existing flooring, where the setting time of other cement-based adhesives would be too slow.

- Installing marble and other stone material, even light coloured stone.
- Installing tiles onto heated screeds.

TECHNICAL CHARACTERISTICS

Keraquick S1 is a powder composed of a blend of special cements, selectively-graded aggregates, synthetic resins and setting accelerators that develop high bonding strength only 2-3 hours after installing.

For this reason floors and walls can be used very quickly. Floors are ready for use in 24 hours and can be walked on after only 2 hours.

By mixing **Keraquick S1** with **Latex Plus** the deformability improves, to meet the requirements of class C2F S2 (highly deformable, fast setting, improved cementitious adhesive) according to EN 12004.

RECOMMENDATIONS

Do not use **Keraquick S1** in the following cases:

- on metal, rubber, PVC and linoleum surfaces;
- on walls and floors subject to extreme flexing or vibration (wood, fibre-cement boards, etc.);
- for bonding insulating panels of expanded polystyrene with protective film.

APPLICATION PROCEDURE

Preparing the substrates

Substrates must be flat, mechanically strong, free from loose particles, grease, oil, paint, wax, etc. and sufficiently dry.

Damp substrates could slow down **Keraquick S1**'s setting process.

Cementitious substrates must not be subject to shrinkage once the tiles have been installed, therefore in warm weather renders should be cured at least one week per centimetre of thickness. Cementitious screeds must have

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Setting white Carrara marble with Keraquick S1 white



An example of an installation with Keraquick S1 in an Auchan supermarket - Sosnowiec (Poland)



Alcuino Bar - Milan - Italy

an overall cure of at least 28 days unless they have been made with the special MAPEI binders for screeds such as **Mapecem** or **Topcem** or with ready-mixed mortars such as **Mapecem Pronto** or **Topcem Pronto**.

Surfaces that are too hot due to exposure to direct sunlight should be cooled by dampening them with water.

Gypsum substrates and anhydrite screeds must be perfectly dry (max. residual humidity 0.5%), sufficiently hard and free of dust. They must be treated with **Primer G** or **Eco Prim T**, while areas subject to high humidity must be treated with **Primer S**.

In general, refer to the relative MAPEI technical documentation regarding substrate preparation before repairing cracks in substrates, consolidating rapid-drying screeds and levelling installation surfaces.

Preparation of the mix

A 25 kg bag of grey **Keraquick S1** should be mixed with approx. 6.3-6.8 litres of water. A 23 kg bag of white **Keraquick S1** should be mixed with approx. 5.8-6.2 litres of water. While stirring, pour **Keraquick S1** into a bucket containing clean water and mix with a mechanical stirrer until a homogeneous lump-free paste is obtained. Let the mix stand a few minutes then stir again briefly before applying. The mixture must be used within 30 minutes of preparation.

Application of the mix

Keraquick S1 is applied to the substrate with a notched trowel to a max of 10 mm thick. First apply a skim coat of **Keraquick S1** onto the substrate using the straight edge of the trowel then apply immediately with a notched trowel a quantity of mix sufficient to spread it at least over the 65-70% of the back surface of the tile (in case of domestic interior walls and floors). In case of exterior walls and floors and heavy traffic areas, the quantity of mix must be sufficient to spread it over the entire surface of the back of the tile.

- for mosaics up to 5x5 cm, the MAPEI square-notched trowel no. 4 is recommended;
- for normal ceramic wall tiles, the MAPEI flat V-notched trowel no. 5 is recommended;
- for floors, very irregular surfaces and tiles with high ribs or lugs, the MAPEI flat V-notched trowel no. 6 is recommended;
- for very demanding applications such as exteriors subject to freezing, installations in swimming pools and bath tubs, floors subject to heavy loads, floors to be polished in situ, dove-tailed tiles, or large-size tiles, the adhesive should also be applied to the back of the tiles (back-buttering), to ensure total transfer of the adhesive on the tile or the slate.

This method is prescribed for sizes exceeding 900 cm² (30x30 cm). If the substrates are very absorbent and with high

temperatures, it is recommended to dampen the substrate in order to extend the adhesive's open time before applying **Keraquick S1**.

Installation of the tiles

It is not necessary to wet the tiles before installation; if, however, the backs are very dusty, they should be dipped in clean water. **Keraquick S1**'s open time in normal temperature and humidity is about 15-20 minutes; unfavourable weather conditions (strong sunlight, drying wind, high temperature), or a highly absorbent substrate may shorten this open time, sometimes quite drastically. For these reasons, 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 re-trowelled with a notched trowel. It is not recommended to wet the adhesive when it has formed a skin because, instead of dissolving the skin, a non-adhesive film will be formed.

Tiling installed with **Keraquick S1** must not be subjected to washout or rain for at least 3 hours and must be protected from frost and strong sunlight for at least 24 hours after installation.

Spot-bonding of insulating materials

Spot bonding to sound-deadening or insulating panels should be applied using a float or trowel. The number and the thickness of the spots should be determined by the flatness of the surface and the 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 **Keraquick S1** has begun to set.

GROUTING AND SEALING

Joints can be grouted after 3 hours with the special MAPEI cementitious or epoxy grouts, available in different colours. Expansion joints must be sealed with the special MAPEI sealants.

SET TO LIGHT FOOT TRAFFIC

Floors are set to light foot traffic after 2-3 hours.

READY FOR USE

Surfaces are ready for use after approximately 24 hours. Basins and swimming pools can be filled after 3 days.



An example of the installation of a marble floor with Keraquick S1 - Feuchtwangen casinò hall (Germany)

TECHNICAL DATA (typical values)

In compliance with:

- European EN 12004 as C2FT S1
- European EN 12004 as C2F S2 (if mixed with Latex Plus)
- ISO 13007-1 as C2FT S1
- ISO 13007-1 as C2F S2 (if mixed with Latex Plus)

PRODUCT IDENTITY

Consistency:	powder
Colour:	white and grey
Bulk density (kg/m ³):	1,200 (white) - 1,400 (grey)
Dry solids content (%):	100
EMICODE:	EC1 R Plus - very low emission

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

Mixing ratio:	100 parts of Keraquick S1 white and grey with 25-27 parts by weight of water
Consistency of mix:	pasty
Colour:	white and grey
Density of the mix (kg/m ³):	1,500
pH of mix:	approx. 11
Pot life:	30 minutes
Application temperature range:	from +5°C to +30°C
Open time (according to EN 1346):	15-20 minutes
Grouting joints:	2-3 hours
Set to light foot traffic:	2-3 hours
Ready for use:	24 hours (3 days for basins and swimming pools)

FINAL PERFORMANCE

Tensile adhesion strength according to EN 1348 (N/mm ²):	
- initial (after 28 days):	3.0
- after heat ageing:	2.2
- after water immersion:	1.0
- after freeze-thaw cycles:	1.3
Adhesion after 6 hours (N/mm ²):	0.8
Resistance to acids:	fair
Resistance to alkalis:	excellent
Resistance to oils:	excellent
Resistance to solvents:	excellent
Temperature when in use:	from -30°C to +90°C
Deformability according to EN 12004:	S1 - deformable

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Cleaning

Tools should be cleaned with water before the adhesive sets. Floors and walls can be cleaned with a damp cloth. Water should be used only in moderate quantities and after a few hours.

CONSUMPTION

1.2 kg/m² per mm of thickness.

Bonding floors and walls

mosaics and small size tiles:	2-3 kg/m ² (trowel no. 4/5)
medium size tiles:	4-5 kg/m ² (trowel no. 5/6)
large sizes, floors, exteriors:	> 6 kg/m ² (trowel no. 6 or 10 or larger)

Bonding insulating material, etc.

foamed materials, etc.:	0.5-0.8 kg/m ²
gypsum wallboard, foamed concrete, etc.:	1.5 kg/m ²
full-bonding on rough surfaces:	2.5 kg/m ²

PACKAGING

Keraquick S1 grey is available in 25 kg bags.
Keraquick S1 white is available in 23 kg bags.
Keraquick S1 (white and grey) is available in cartons containing 4x5 kg bags in Alupack.

STORAGE

Keraquick S1 in 23 and 25 kg bags maintain their own properties for 12 months if stored in a dry place in the original sealed packaging. The maximum recommended storage time for 5 kg bags in Alupack is 24 months. Prolonged storage could extend the setting time without altering the final performance. The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Keraquick S1 is irritant; contains cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed. During use, wear 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 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

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.



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



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