



# Keraquick S1

**High-performance,  
deformable, fast setting  
cementitious adhesive  
with no vertical slip,  
for ceramic tiles and  
stone material**



## **CLASSIFICATION IN COMPLIANCE WITH ISO 13007**

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

## **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, gypsum board, glass and rock wool, Eraclit<sup>®</sup>, foamed-concrete blocks, sound-deadening panels, 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 (for the latter, use **Keraquick S1** white).
- Installing tiles onto heated screeds.

## **TECHNICAL CHARACTERISTICS**

**Keraquick S1** is a grey or white powder composed of a blend of special cements, selectively-graded aggregates, synthetic resins and setting accelerators that develop high bond strength only 2-3 hours after installation.

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 ISO 13007.

## **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 an overall cure of at least 28 days unless they have been made with the special MAPEI binders for screeds such

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as **Mapecem, Mapecem Pronto, Topcem or Topcem Pronto**, ready-mixed mortars.

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 moisture 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.

## Preparing the mix

A 20 kg bag of **Keraquick S1 Grey** should be mixed with approx. 4.6–5.0 litres of water, while a 20 kg bag of **Keraquick S1 White** should be mixed with approx. 4.6–5.0 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.

## Applying the mix

**Keraquick S1** is applied to the substrate with a notched trowel to a max of 10 mm thick.

To achieve good adhesion, first apply a skim coat of **Keraquick S1** onto the substrate using the straight edge of the trowel followed immediately by the correct thickness. When selecting the trowel, choose one that transfers the adhesive to at least 65 to 70% of the back of the tiles for interior walls and floors and 100% coverage for heavy traffic areas and exteriors.

- for mosaics up to 5x5 cm, the MAPEI square-notched trowel No. 4 is recommended;
- for normal ceramic wall tiles, the MAPEI V-notched trowel No. 5 is recommended;
- for floors, very irregular surfaces and tiles with high ribs or lugs, the MAPEI 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, tiles with deep ribs or lugs, or large-size tiles, the adhesive should also

be applied to the back of the tiles (back-buttering).

This method is prescribed for sizes exceeding 900 cm<sup>2</sup> (30x30 cm). If the substrates are very absorbent and in high temperatures, it is recommended to dampen the substrate in order to extend the adhesive's open time before applying **Keraquick S1**.

## Installing 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, to just a few minutes.

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.

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 insulating materials

Spot bonding to sound-deadening or insulating panels should be applied using a float or trowel, the trowel type and size to 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.



Setting white Carrara marble with Keraquick S1 white



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



An example of the installation of marble to walls with Keraquick S1 - Feuchtwangen casinò bathroom (Germany)

An example of the installation of a marble floor - 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

Type:	powder
Colour:	dark grey or white
Bulk density (kg/m <sup>3</sup> ):	1,400 (grey); 1,200 (white)
Dry solids content (%):	100
GREENSTAR™:	Complies - very low emission

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

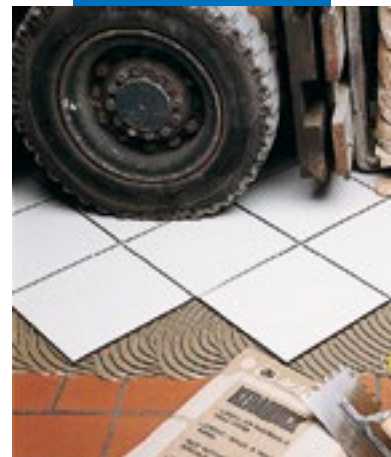
Mixing ratio:	100 parts of <b>Keraquick S1</b> grey with 23-25 parts by weight of water 100 parts of <b>Keraquick S1</b> white with 23-25 parts by weight of water
Consistency of mix:	pasty
Colour:	grey, white
Density of the mix (kg/m <sup>3</sup> ):	1,500
pH of mix:	approx. 11
Pot life:	30 minutes
Application 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 <sup>2</sup> ):	
- initial (after 28 days):	3.0
- after heat ageing:	3.0
- after water immersion:	1.0
- after freeze-thaw cycles:	1.0
Adhesion after 6 hours (N/mm <sup>2</sup> ):	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



Laying heavy insulation panels



Rapid overlaying on asphalt industrial floor



Repair work in a refrigerator unit

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All relevant references for the product are available upon request and from [www.mapei.com.au](http://www.mapei.com.au)

## 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.

## Cleaning

Tools should be cleaned with water before the adhesive sets. Floors and walls can be cleaned with a damp cloth.

## CONSUMPTION

A 20 kg bag covers 6–7.5m<sup>2</sup> with a 6 x 6 x 6mm square-notched trowel and 4–5m<sup>2</sup> with a 6 x 10 x 6mm square notched trowel.

## Bonding insulating material, etc.

foamed materials etc.: 0.5-0.8 kg/m<sup>2</sup>

gypsum wallboard,  
foamed concrete: 1.5 kg/m<sup>2</sup>

full-bonding on  
rough surfaces: 2.5 kg/m<sup>2</sup>

## PACKAGING

Grey **Keraquick S1** available in 20 kg bags.

White **Keraquick S1** available in 20 kg bags.

## STORAGE

12 months in a dry place in the original packaging. Prolonged storage could extend the setting time without altering the final performance.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Keraquick S1** contains cement that when in contact with sweat or other body fluids causes an irritant alkaline reaction and allergic reactions to those predisposed. When applying the product, use protective gloves and goggles and take the usual precautions for handling chemical products. If the product comes into contact with the eyes or skin, wash immediately with plenty of clean 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 Safety Data Sheet available from our website at [www.mapei.com.au](http://www.mapei.com.au).

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



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