



# Keraflex



**High-performance  
cementitious adhesive  
with no vertical slip  
and extended open  
time for ceramic tiles  
and stone material**

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

**Keraflex** is an improved (2) slip resistant (T) cementitious adhesive (C) with extended open time (E) classified as C2TE.

## **WHERE TO USE**

Interior and exterior bonding of ceramic tiles (single-fired, double-fired, porcelain tiles, terracotta, klinker, etc.) stone materials and mosaics of every type on floors, walls and ceilings. Also suitable for spot bonding of insulating materials such as expanded polystyrene, rock and glass wool, Eraclit® (wood-cement panels), sound-deadening/reduction panels.

## **Some application examples**

- Bonding ceramic tiles (double fired, single fired, porcelain, clay tiles, klinker, etc.), stone materials and mosaics on the following substrates:
  - cement or mortar wall renders
  - interior aerated concrete block walls
  - gypsum or anhydrite after having first applied **Primer G**
  - gypsum board
  - underfloor heated installations
  - cement screeds, as long as they are sufficiently cured and dry
  - interior painted walls, as long as the paint is firmly anchored
  - over MAPEI waterproofing membranes such as **Mapelastic Smart**, **Mapelastic AquaDefense** and **Mapegum WPS**
- Tile on tile of existing flooring
- Bonding small sized tiles in swimming pools and basins
- Bonding floors subject to heavy stress



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## TECHNICAL CHARACTERISTICS

**Keraflex** is a grey or white powder composed of cement and graded aggregates. It contains a high quantity of synthetic resins and special admixtures created according to a formula developed in MAPEI's research laboratories. A mortar with the following features is obtained when mixed with water:

- easily workable
- highly thixotropic: **Keraflex** can be applied on a vertical surface without slumping or letting the tiles slip, even for heavy tiles. Tiles can be installed from the top towards the bottom without using spacer pegs
- perfect adherence to all materials normally used in building
- hardens without appreciable shrinkage
- extended open time

## RECOMMENDATIONS

**DO NOT** use **Keraflex**:

- on concrete subject to high shrinkage
- on walls and floors subject to strong movement or vibration (wood, fibre-cement, etc.)
- on metal surfaces

## APPLICATION PROCEDURE

### Preparing the substrate

The substrates must be flat, mechanically resistant, free of loose parts, grease, oils, paints, wax, etc. Damp substrates can slow down the setting of **Keraflex**.

Cement substrates should not be subject to shrinkage after the installation of the ceramic tiles, therefore, during spring and summer, renders must cure at least one week for each cm of thickness and cement screeds must have an overall cure time of at least 28 days, unless they are made with special binders for MAPEI screeds such as **Mapecem**, **Mapecem Pronto**, **Topcem** or **Topcem Pronto**.

Dampen with water to cool surfaces which have become heated from exposure to sunlight.

Gypsum substrates and anhydrite screeds must be perfectly dry (max. residual moisture 0.5%), sufficiently hard and free from dust. It is absolutely essential that they must be treated with **Primer G** or **Eco Prim T**, while areas subject to extreme dampness must be primed with **Primer S**.

### Preparing the mix

Mix **Keraflex** with clean water until a smooth, lump-free paste is obtained. Leave to rest approximately 5 minutes and re-stir.

In a clean mixing container pour in 5.4 - 6.2 litres of clean water. Add the 20kg bag of **Keraflex** powder. Using an electric mix (approx 300RPM) mix until a smooth, lump-free paste is obtained.

Leave the mix to rest for approximately 5 minutes and then re-stir.

Mixed this way, **Keraflex** has a pot life of approximately 8 hours.

### Spreading the mix

**Keraflex** is applied to the substrate using a notched trowel. Choose a trowel that allows for complete coverage of the tile back.

To achieve a good adhesion, spread an initial thin layer of **Keraflex** on the substrate using the flat side of the trowel. Immediately after, apply the desired thickness of **Keraflex** using a suitable notched trowel, depending on the type and size of the tiles (see "Coverage").

For external ceramic tile floors and walls, sizes greater than 900 cm<sup>2</sup>, floors subject to heavy loads, when applying in swimming pools and basins filled with water, spread also the adhesive on the back of the tiles (back-buttering) in order to ensure a complete coverage.

### Installing the tiles

There is no need to wet the tiles before installing them. Only with very dusty backs it is recommended to dip the tiles in clean water.

Tiles should be installed under a firm pressure to ensure good coverage of the adhesive.

In normal temperatures and humidity conditions, the open time of **Keraflex** is approximately 30 minutes. Unfavourable weather conditions (strong sun, wind, high temperatures, etc.) or a highly absorbent substrate can reduce the open time, even to just a few minutes.

It is therefore necessary that careful checks be made to ensure that a skin does not form on the surface of the spread adhesive, which should stay fresh. If not, re-freshen the adhesive by re-spreading with a notched trowel.

It is not recommended to wet the adhesive with water once a skin has formed because, instead of dissolving the skin, the water will form an anti-adhesive film.

If necessary, tiles should be adjusted within 60 minutes of installation.

Tiling installed with **Keraflex** must not be washed or exposed to rain for at least 24 hours and must be protected from frost and strong sun for at least 5-7 days.

### Spot-bonding insulating materials

For spot-bonding sound-deadening or insulating panels, apply **Keraflex** with a trowel or a float.

### GROUTING AND SEALING

Wall joints 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.



Installation of pre-glossed marble on floors



Installation of single-fired tile on expanded foam concrete block walls



Single-fired tile on terrazzo tile of an external wall

## TECHNICAL DATA (typical values)

In compliance with:

- European EN 12004 such as C2TE
- ISO 13007-1 such as C2TE

### PRODUCT IDENTITY

<b>Consistency:</b>	powder
<b>Colour:</b>	white or grey
<b>Bulk density (kg/m<sup>3</sup>):</b>	1,300
<b>Dry solids content (%):</b>	100

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

<b>Mixing ratio:</b>	5.4 - 6.2 litres per 20kg bag
<b>Consistency of the mix:</b>	pasty
<b>Density of the mix (kg/m<sup>3</sup>):</b>	1,500
<b>pH of mix:</b>	13
<b>Pot life:</b>	over 8 hours
<b>Application temperature range:</b>	from +5°C to +40°C
<b>Open time (according to EN 1346):</b>	> 30 minutes
<b>Adjustability time:</b>	45 minutes
<b>Ready for grouting on walls:</b>	after 4-8 hours
<b>Ready for grouting on floors:</b>	after 24 hours
<b>Set to light foot traffic:</b>	24 hours
<b>Ready for use:</b>	14 days

### FINAL PERFORMANCES

<b>Bonding strength according to EN 1348 (N/mm<sup>2</sup>):</b>	
- initial bonding (after 28 days):	2.2
- bonding after heat exposure:	2.0
- bonding after immersion in water:	1.5
- bonding after freeze/thaw cycles:	1.7
<b>Resistance to alkalis:</b>	excellent
<b>Resistance to oils:</b>	excellent (poor to vegetable oils)
<b>Resistance to solvents:</b>	excellent
<b>Temperature when in use:</b>	from -30°C to +90°C



Tile on tile with  
Keraflex grey

# Keraflex



An example of an installation of porcelain tiles - Zanchetta Shopping Centre - Treviso (Italy)



Fixing polystyrene foam slabs with Keraflex white

## 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.

Swimming pools and basins can be filled after 21 days.

## Cleaning

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

## CONSUMPTION

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

## NOTE:

Coverages shown are approximate and are given for estimating purposes only. Actual job-site coverages may vary according to the tile size and thickness, job conditions and setting practices. For coverage values contact MAPEI's Technical Services Department on 1800 652 666.

## PACKAGING

Keraflex white and grey are available in 20 kg bags and in 4x5 kg boxes.

## STORAGE

Keraflex can be stored 12 months in a normal environment in original packaging in a dry, elevated area.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Keraflex contains cement that when in contact with sweat or other body fluids causes an irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. It is recommended to use protective gloves and goggles and to take the usual precautions for handling chemicals. In case of contact with 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 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.au](http://www.mapei.com.au)

## 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 effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at [www.mapei.com.au](http://www.mapei.com.au)**  
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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)**

## Mapei Australia Pty. Ltd

180 Viking Drive Wacol Qld 4076

Tel. +61-7-3276 5000 - Fax. +61-7-3276 5076

Website: [www.mapei.com.au](http://www.mapei.com.au) - Email: [sales@mapei.com.au](mailto:sales@mapei.com.au)

**Manufactured in Brisbane - Australia**



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