

KERAFLEX

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



BENEFITS AND FEATURES

- Excellent bond
- Excellent workability
- No vertical slip
- Extended open time
- Deformable

CLASSIFICATION IN COMPLIANCE WITH AS/ISO 13007

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

WHERE TO USE

Exterior and interior wall and floor bonding of ceramic tiles (porcelain tiles, double-fired, single-fired, klinker, terracotta, etc.), stone material (as long as dimensionally stable and not sensitive to moisture and staining) and mosaic of all types.

Some application examples

Keraflex can be used for tile on tile of existing flooring, bonding small-sized tiles in swimming pools and basins and bonding floors subject to heavy stress.

Also for bonding ceramic tiles, stone material and mosaic on the following substrates:

- concrete and mortar wall renders;
- interior aerated concrete block walls;
- plasterboard, provided it is fastened to a rigid support;
- underfloor heated installations;
- cementitious screeds made with no-slump consistency or self-levelling products;
- interior painted walls, as long as the paint is firmly anchored,
- over MAPEI waterproofing membranes such as **Mapelastic Smart**, **Mapelastic AquaDefense Zero** and **Mapegum WPS AU**.

- uncoupling, anti-fracture and waterproofing membranes such as **Mapeguard UM 35** or **Mapeguard WP 200**.

TECHNICAL CHARACTERISTICS

Keraflex is a grey or white powder made of cement, sands of selected grain size, a high amount of synthetic resins and special additives according to a formulation designed in MAPEI research laboratories. It has very low content and emission of VOC to protect the health of both applicators and end users, and is certified EC1 Plus by the German association GEV. **Keraflex** contributes to the achievement of important Green Star™ and LEED credits.

When mixed with water, a mortar with the following characteristics is obtained:

- excellent bond to all materials normally used in the building industry;
- extended open time;
- excellent workability;
- highly thixotropic: **Keraflex** may be applied on vertical surfaces without slumping and without allowing tiles to slip, including large, heavy tiles.
- good deformability;
- hardens without significant shrinkage.

RECOMMENDATIONS

Do not use **Keraflex**:

- on not sufficiently cured concrete;
- on wood and wood conglomerates;
- on metal surfaces, linoleum, rubber, PVC;
- with marble and natural stone slabs or engineered materials subject to efflorescence or staining or movement due to moisture;
- on floors and walls subject to strong movement or vibration.

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 AU**. Dampen with water to cool surfaces that have become heated from exposure to sunlight.

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 between 5.6 to 6.0 litres of clean water. Add the 20 kg 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 in accordance with AS 3958. 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.

For external ceramic tile floors and walls, sizes greater than 900 cm², 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 is it 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 temperature 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. When installing tiles, in order to maintain the correct grout size and to reduce any height differences between adjacent tiles, it is suggested to use levelling systems from the **MaPeLevel** range.

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. If cleaning, maintenance and protection of surfaces is required, use the suitable products from the **UltraCare** range.

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.

Keraflex can be permanently immersed in water 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 20 kg bag covers 6 to 7.5 m² with a square-notched trowel 6x6x6 mm and 4 to 5 m² with a 6x10x6 mm square-notched trowel.

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.

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

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.com.au

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

In compliance with:

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

PRODUCT IDENTITY

Consistency:	powder
Colour:	white or grey
Bulk density:	1,300 kg/m ³
EMICODE:	EC1 Plus - very low emission

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

Mixing ratio:	100 parts of Keraflex with 28-30 parts of water by weight
Consistency of mix:	paste
Density of the mix:	1,500 kg/m ³
pH of mix:	13
Pot life:	over 8 hours
Application temperature:	from +5°C to +40°C
Open time:	> 30 minutes
Adjustment time:	45 minutes
Wall grouts:	after 4-8 hours
Floor grouts:	after 24 hours
Set to light foot traffic:	24 hours
Ready for use:	14 days

FINAL PERFORMANCE

Bond strength (N/mm²):

- initial bond (after 28 days):
- bond after heat exposure:
- bond after immersion in water:
- bond after freeze/thaw cycles:

2.2
2.0
1.5
1.7

Resistant to alkalis:

excellent

Resistance to oils:

excellent (poor to vegetable oils)

Resistance to solvents:

excellent

Service temperature:

from -30°C to +90°C

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

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.au.

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

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