



Keraflex Maxi

Flexible S1 adhesive



High performance, deformable cementitious adhesive with extended open time and no vertical slip, for ceramic tiles. Especially suitable for the installation of large-size porcelain tiles and natural stone

CLASSIFICATION IN COMPLIANCE WITH EN 12004

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

Keraflex Maxi is CE marked, as declared in ITT certificate N° 25040269/Gi (TUM) issued by the Technische Universität München laboratory (Germany).

CLASSIFICATION IN COMPLIANCE WITH EN 12002

Keraflex Maxi is a deformable adhesive of class S1.

WHERE TO USE

- Interior and exterior bonding, up to 15 mm bed depth, of ceramic tiles (single and double fired tiles, porcelain tiles, klinker, terracotta, etc.) on uneven substrates and renders, without having to level beforehand.
- Interior and exterior bonding of stone materials (provided that they are not sensitive to moisture).
- Spot bonding of insulating material such as expanded polystyrene, rock and glass wool, Eraclit® (wood-cement panels), sound-deadening panels, cork, etc.

Some application examples

- Bonding ceramic tiles (double-fired, single-fired, porcelain tiles, klinker etc.) and stone materials (provided that they are not sensitive to moisture) on conventional substrates such as:
 - cementitious screeds and underfloor heating installations;
 - cementitious renders or lime and cement-based mortar;



Keraflex Maxi



External installation of
klinker tiles



Installation of
hand made terracotta
on an uneven substrate



External installation of
relief terrazzo
"graniglie" tiles

- gypsum board as long as firmly fixed;
- tiling to timber where it's screw fixed and rigid.

- Ceramic and natural stone tiles on existing flooring (ceramic, marble, etc.).
- Installation of floors subjected to heavy traffic.
- Installation of floor and wall coverings on substrates waterproofed with **Mapelastic**.
- Interior and exterior bonding of tiles or strips (porcelain tiles, klinker, single-fired, terracotta) with highly profiled ribs or lugs.

TECHNICAL CHARACTERISTICS

Keraflex Maxi is a grey or white powder composed of cement and fine graded sands. It contains high levels of synthetic resins and special additives and has been developed in MAPEI's Research and Development Laboratories.

A mortar with the following features is obtained when mixed with water:

- Low viscosity, therefore easily workable.
- Highly thixotropic: **Keraflex Maxi** can be applied on a vertical surface without sagging or even with large or heavy tiles.
- Accommodates irregularities in substrate and tile.
- Perfect adherence to all materials normally used in building.
- Hardens, even when very thickly applied, with minimal shrinkage.
- Extended open and adjustability time.

RECOMMENDATIONS

Do not use **Keraflex Maxi** in the following cases:

- On metal, rubber, PVC and linoleum surfaces.
- With marble and natural stone slabs subject to efflorescence or stains.
- With natural or artificial stone material slabs subject to moisture expansion.
- On precast concrete or subject to strong movement.
- When surfaces need to be trafficked after a short time.

APPLICATION PROCEDURE

Preparing the substrate

All substrates receiving **Keraflex Maxi** must be cured, mechanically resistant, sound, clean, free of cracks, loose parts, oil, grease, wax and dust and sufficiently dry.

Cementitious substrates should not be subject to shrinkage after the installation of ceramic tiles, therefore during spring and summer, renders must cure at least 2 weeks for each cm of thickness and cementitious screeds must have an overall cure time of at least 3 weeks, unless they are produced with special binders for MAPEI screeds such as

Mapecem, Mapecem Pronto, Topcem or Topcem Pronto.

Dampen with water to cool surfaces heated from exposure to sunlight.

Gypsum substrates and anhydrite screeds must be perfectly dry, sufficiently hard and free from dust. It is essential that they be treated with **Primer G** or **Mapeprim SP**, while areas subject to dampness must be primed with **Primer S**.

Preparing the mix

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

Use approximately 5.5 litres of water for every 20 kg of powder.

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

Applying the mix

Keraflex Maxi is applied to the substrate using a notched trowel. Choose a trowel that gives a complete coverage to the backs of the tiles.

To achieve good adhesion, spread a thin layer of **Keraflex Maxi** on the substrate using the straight edge of the trowel. Immediately after, apply the desired thickness of **Keraflex Maxi** using a suitable notched trowel, depending on the type and size of the tiles.

For outdoor ceramic tiling, sizes greater than 300x300 mm, floors must be subject to heavy loads, or when applying in swimming pools and basins filled with water, spread the adhesive on the back of the tile (back-buttering) in order to ensure a complete coverage.

Installing the tiles

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

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

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

Careful checks must be made to ensure that a skin does not form on the surface of the spread adhesive. 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 the water will form an anti-adhesive film.

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

Tiling installed with **Keraflex Maxi** 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 Maxi** with a trowel or a float, at a thickness determined by the surface levels and by the weight of the panels.

TECHNICAL DATA (typical values)

In compliance with:

- European EN 12004 as C2TE
- European EN 12002 as S1
- American ANSI A 118.4-1999
- Canadian 71 GP 30 M type 2

PRODUCT IDENTITY

Type:	powder
Colour:	grey, white
Bulk density (kg/m³):	1400
Dry solid content (%):	100
Storage:	12 months in a cool dry place in original packaging
Hazard classification according to EC 99/45:	irritant. Before using refer to the "Safety Instructions for the preparation and application" paragraph and the information on the packing and safety data sheet
Customs class:	3824 50 90

COMPOSITION AND PROPERTIES OF MIXTURE at +23°C and 50% R.H.

Mixing ratio:	100 parts Keraflex Maxi grey with 26-28 parts water by weight 100 parts Keraflex Maxi white with 26-28 parts water by weight
Consistency of mix:	creamy paste
Density of the mix (kg/m³):	1500
pH of mix:	over 12
Pot life:	over 8 hours
Application temperature:	from +5°C to +35°C
Open time (accordig to EN1346):	> 30 minutes
Adjustability time:	approx. 60 minutes
Ready for grouting on walls:	after 4-8 hours
Ready for grouting on floors:	after 24 hours
Set to light foot traffic:	24 hours
Ready for use:	14 days

FINAL PERFORMANCES

Tensile adhesion strength in compliance with EN 1348 (N/mm²):	
- initial tensile adhesion strength (after 28 days):	3.0
- tensile adhesion strength after heat ageing:	2.5
- tensile adhesion strength after water immersion:	1.1
- tensile adhesion strength after freeze/thaw cycles:	1.5
Resistance to alkali:	excellent
Resistance to oils:	excellent (poor to vegetable oils)
Resistance to solvents:	excellent
Temperature when in use:	from -30°C to +90°C
Deformability according to EN 12002:	S1 - deformable



*Thickly applied
porcelain tiles on
a wall*



*Installation of external
hewn back stones with
or without buttering,
depending on
thickness*

Keraflex Maxi



GROUTING AND SEALING

Wall joints can be grouted after 4-8 hours and floor joints can be grouted after 24 hours with the relevant MAPEI cementitious or epoxy grouts, available in different colours. Expansion joints must be sealed with the relevant MAPEI sealants.

LIGHT FOOT TRAFFIC

Floors are able to take light foot traffic after approx. 24 hours.

READY FOR USE

Surfaces are ready for use after approximately 14 days.

Cleaning

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

CONSUMPTION

Bonding ceramic tiles

- 1.2 kg/m² per mm of thickness.

Bonding panels

- Applied with a trowel approx. (rounded notch): 6-7 kg/m²
- Spot-bonding (with a trowel): 4-6 kg/m²

PACKAGING

Keraflex Maxi is available in 10 and 20 kg paper bags.

STORAGE

Keraflex can be stored 12 months in a dry place in original packaging.

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND INSTALLATION

The product contains cement that when in contact with sweat or other bodily fluids, produces an irritant alkaline reaction and allergic reactions to those predisposed. Use protective gloves and goggles. For further information, consult the safety data sheet.

FOR PROFESSIONALS.

WARNING

Although the technical details and recommendations contained in this product report 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 applications: 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.

All relevant references of the product are available upon request



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