



MAPEI



Keraflex Easy

High-performance cementitious adhesive, with extended open time, easy to apply, with a high wetting capability of the back of tiles and an extremely low emission level of volatile organic compounds. It is particularly suitable for laying large sizes of porcelain tiles on sizeable flooring areas. It can be applied up to a thickness of 10 mm



CLASSIFICATION ACCORDING TO EN 12004

Keraflex Easy is a C2E class cementitious (C) adhesive with improved (2) properties and an extended open time (E).

Keraflex Easy has been awarded CE certification, as indicated in certificate **N° 25080254/Gi** issued by the Technische Universität München laboratory (Germany).

WHERE TO USE

Bonding ceramic tiles (double-fired, single-fired, porcelain, terracotta, klinker, etc.), stable stone material not subject to staining and all types of mosaic on external surfaces. It is suitable for large-sized tiles and large flooring areas, particularly floors in commercial, industrial and civil environments. It may be applied at a thickness up to 10 mm.

Some application examples

- Bonding ceramic tiles (double-fired, single-fired, porcelain, terracotta, klinker, etc.), stone material and mosaic on the following kinds of substrate:
 - cementitious screeds which are well cured and dry, and screeds made using special binders (such as MAPEI **Topcem** and **Mapecem**);
 - heated substrates;
 - stable, cured concrete floors;
 - cementitious render;
 - internal walls made using cellular blocks, after treating with **Primer G**;
 - gypsum and anhydrite, if dry and after treating with **Primer G**;
 - plasterboard;

– waterproofing membranes in **Mapelastic**, **Mapelastic Smart** and **Mapegum WPS**.

- Laying on top of existing floors in ceramic and stone materials.
- Bonding tiles in swimming pools and baths.
- Bonding floors subject to high stresses and intense traffic.

TECHNICAL CHARACTERISTICS

Keraflex Easy is a grey or white-coloured powder made up of cement, selected graded sand, a high amount of synthetic resins and special additives according to a formula developed in MAPEI's own research laboratories.

Keraflex Easy emits an extremely low level of volatile organic compounds into the area where it is used, and safeguards the quality of the air and health of floor layers, thus contributing to the concept of a sustainable building industry.

Keraflex Easy is certified EMICODE EC1 R (extremely low emission level of volatile organic compounds) by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.).

When mixed with water, it forms a mortar with the following characteristics:

- low viscosity and, therefore, good workability;
- excellent buttering on the back of tiles, to avoid having to use the double-buttering technique, when laying large tiles in internal environments;



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Laying Keraflex Easy on a substrate with a half moon notched trowel with rounded teeth



Laying large-sized tiles



Checking buttering on the back face of tiles

- bonds perfectly to all materials normally used in the building industry;
- hardens with very little shrinkage;
- particularly long open and adjustment times, to make installation easier.

RECOMMENDATIONS

Do not use **Keraflex Easy**:

- on concrete with high shrinkage rates;
- on wood or wooden conglomerates;
- on metal, linoleum or rubber surfaces;
- on floors and substrates subject to large amounts of movement or vibration;
- for laying flooring materials which require a layer of adhesive thicker than 10 mm;
- when the floor surface must be put quickly into service.

APPLICATION PROCEDURE

Preparation of the substrate

Substrates must be flat, strong, free of loose parts, grease, oil, paintwork etc. and must be sufficiently dry. Damp substrates will slow down the setting of **Keraflex Easy**.

Cementitious substrates must not shrink after laying tiles. Therefore, in good weather, render must be cured for at least one week per cm of thickness, while cementitious screeds must be cured for at least 28 days, unless they are made using MAPEI special binders and pre-blended mortar for screeds, such as **Mapecem**, **Mapecem Pronto**, **Topcem** or **Topcem Pronto**.

If the surface is too hot due to direct sunlight, cool it down with water.

Gypsum substrates and anhydrite screeds must be perfectly dry (maximum residual humidity content 0.5%), hard enough for the final intended use and free from dust. They must also be treated with **Primer G** or **Eco Prim T**, while areas subject to high humidity must be primed with **Primer S**.

Preparation of the mix

Blend **Keraflex Easy** with clean water to obtain a smooth, lump-free mix. Let the mix stand for approximately 5 minutes, then blend again.

The amount of water required ranges from 31-33 parts per 100 parts in weight of **Keraflex Easy**, equal to 7.7-8.3 litres of water per 25 kg of powder.

When blended as described above, the pot life is approximately 8 hours.

Spreading the mix

Apply **Keraflex Easy** on the substrate using a suitable notched trowel. Use a trowel with a notch size which guarantees complete buttering of the back of the tile.

To guarantee a good bond, apply a thin layer of **Keraflex Easy** on the substrate using the smooth side of the trowel, and then immediately apply a further layer of **Keraflex Easy** to the thickness required using a suitable trowel, dependent on the

type and size of the tiles (please refer to the "Consumption" section).

If the product is applied on external surfaces, or on surfaces subject to heavy traffic, apply enough adhesive to guarantee that no voids are left between the substrate and the back face of the tiles.

Laying tiles

The tiles must not be wet before they are laid. However, if the back faces are particularly dusty, wash them by dipping in clean water. When laying tiles, apply firm pressure to guarantee good buttering.

The open time for **Keraflex Easy** is approximately 30 minutes in normal weather conditions. When conditions are not ideal (direct sunlight, dry wind, high temperatures, etc.), or if the substrate is particularly absorbent, this time may be reduced to only a few minutes.

Therefore, check often to make sure a skin does not form on the surface of the adhesive, and that it is still fresh. If a skin forms, re-apply the adhesive with the notched trowel.

Do not wet the surface of the adhesive if a skin forms. Water does not dissolve the skin, and impedes a good bond.

Final adjustment of the tiles must be carried out within 60 minutes of laying.

Finishes installed using **Keraflex Easy** must be protected from water and rain for at least 24 hours, and from freezing weather and direct sunlight for at least 5 to 7 days.

GROUTING AND SEALING

Tile joints may be grouted after 4 to 8 hours on walls and after 24 hours on floors. Use a MAPEI cementitious or epoxy grout, available in a wide variety of colours. Expansion joints must be sealed using a special MAPEI sealant.

Set to light foot traffic

Floors may receive foot traffic after approximately 24 hours.

READY FOR USE

Surfaces may be put into service after approximately 14 days.

Wait at least 21 days before filling tanks and swimming pools.

Cleaning

Tools and containers may be cleaned using water while **Keraflex Easy** is still fresh. Clean surfaces using a damp cloth before the adhesive sets.

CONSUMPTION

Bonding ceramics:

- Mosaic and small sizes in general (trowel No. 4): 2 kg/m²
- Normal sizes (trowel No. 5): 2.5-3 kg/m²
- Large sizes, external floors (trowel No. 6): 5 kg/m²

PACKAGING

Keraflex Easy is available in either white or grey, and is supplied in 25 kg paper bags.

TECHNICAL DATA (typical values)

Conforms to the following standards:

- European EN 12004 (C2E)
- ISO 13007-1 (C2E)
- American ANSI A 118.1- 1999
- Canadian 71 GP 30 M type 2

PRODUCT IDENTITY

Consistency:	powder
Colour:	white or grey
Bulk density (kg/m³):	1,300
Dry solids content (%):	100
Storage:	12 months in a dry place in its original packaging
EMICODE:	EC1 R - very low emission
Hazard classification according to EC 1999/45:	irritant. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	3824 50 90

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

Mixing ratio:	100 parts of Keraflex Easy with 31-33 parts in weight of water
Consistency of mix:	pasty
Density of mix (kg/m³):	1,500
pH of mix:	13
Pot life of mix:	more than 8 hours
Application temperature range:	from +5°C to +40°C
Open time (according to EN 1346):	> 30 minutes
Adjustment time:	approximately 60 minutes
Grouting tile joints on walls:	after 4-8 hours
Grouting tile joints on floors:	after 24 hours
Set to light foot traffic:	24 hours
Ready for use:	14 days

FINAL PERFORMANCE

Bond strength according to EN 1348 (N/mm²):	
- initial bond (after 28 days):	2.0
- bond strength after application of heat source:	2.0
- bond strength after immersion in water:	1.3
- bond strength after freeze-thaw cycles:	1.5
Resistance to alkalis:	excellent
Resistance to oils:	excellent (poor with vegetable oils)
Resistance to solvents:	excellent
In-service temperature range:	from -30°C to +90°C

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STORAGE

Keraflex Easy may be stored for up to 12 months in its original unopened packaging in a dry place.

This products conforms to the requirements of Directive 2003/53/CE.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

The product contains cement which, in contact with perspiration or other body fluids, produces an irritating alkaline reaction and, in those subjects sensitive to such products, an allergic rash.

Use protective gloves and goggles. For further information, please refer to the Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

WARNING

While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under

all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.



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
More than 150 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