

# Keracrete



**Synthetic latex mixed with sand and cement to make adhesive to bond ceramic tiles and stone material, and smoothing/skim mortar**

## WHERE TO USE

**Keracrete** is a latex to be mixed with sand and cement. It is suitable for:

- Exterior and interior bonding of ceramic tiles of all types on walls and floors.
- Interior and exterior bonding of natural stone of every kind, provided they are dimensionally stable and not subject to staining.
- Application of cementitious smoothing/skim compound to make substrates and to skim or patch up small areas.

## Some application examples

Bonding of:

- Glass mosaic, klinker and single fired tiles in swimming pools.
- Porcelain or glass mosaics, klinker and single fired tiles, quarry tiles on outside façades, balconies and terraces.
- Tiles of every type in places where a definite chemical resistance is required (dairies, breweries, wine-cellars, food and chemical industries).
- All types of ceramic tiles over underfloor heating installations.
- Marble and other natural stone on outside façades, balconies and terraces.
- Creating thin concrete with cement mortars.

## TECHNICAL CHARACTERISTICS

**Keracrete** is a synthetic-rubber latex to be mixed with sand and cement, to obtain an adhesive suitable for bonding ceramic tiles and stone material or for smoothing/skim mortars.

## RECOMMENDATIONS

Never use **Keracrete** mixed with sand or cement:

- on walls and floors subject to extreme flexing (chipboard and wood agglomerates, asbestos-cement etc.);
- on placed concrete or on precast elements that are not sufficiently cured and stable;
- on metal surfaces;
- the use of **Adesilex P10** is recommended for particularly light-coloured glass mosaics when variations in colour of the coating needs to be kept to a minimum.

## APPLICATION PROCEDURE AS AN ADHESIVE

### Preparing the substrates

Substrates must be cured, mechanically strong, free of loose particles, grease, oils, paints, wax and must be sufficiently dry.

Cementitious substrates must not be subject to shrinkage after the installation of tiles. During warm weather, renders must cure for at least 1 week per each centimetre of thickness. Cement screed must have an overall curing of at least 28 days, unless they are made with special MAPEI screed binders such as **Mapecem**, **Mapecem Pronto**, **Topcem** or **Topcem Pronto**.

# Keracrete



An example of an installation of Granitello in underground - Linea 3 - Milan (Italy)



An example of an installation of mosaics with Keracrete in a swimming pool



New harbor in Civitavecchia: outdoor installation of terracotta with Keracrete

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

Gypsum substrates and anhydrite screeds must be perfectly dry, sufficiently hard and free of dust. It is absolutely essential to treat them with **Primer G** or **Eco Prim T**. In areas subject to extreme damp, **Primer S** should be used to prime the substrate.

## Preparing the mix

**Keracrete** must be blended with a mixture of cement and clean fine sand aggregate in a ratio of 1 part by weight of **Keracrete**, 2 parts by weight of cement (class 32.5), 2 parts by weight of sand; or 1 part by weight of **Keracrete**, 1.5 parts by weight of cement (class 42.5), 2 parts by weight of sand; or alternatively 1 part by weight of **Keracrete**, 1 part by weight of cement (class 52.5) and 2 parts by weight of sand.

Mixing is performed by pouring the powder (sand and cement) into **Keracrete** latex while stirring continuously, preferably with an electrical stirrer until a smooth paste is obtained. Leave to set for 2-3 minutes and briefly re-stir before use.

Use the mixture within 90 minutes after its preparation.

To obtain longer trowelability and open time, the sand and cement can be replaced partially with a cement adhesive such as **Kerabond** or **Adesilex P9**; this is advisable in summer, with highly absorbent surfaces or in strong sunlight (it should, however, be kept in mind that this procedure will increase curing time).

## Spreading the mix

The mixture is applied to the substrate with a notched trowel. The general principle to follow when selecting the right trowel is to choose one that gives a coverage of at least 65-70% of the back of the tiles for internal walls and light traffic areas and 100% coverage for heavy traffic areas and all external work.

To achieve a good bond, first spread a thin coat of the mixture onto the substrate using the straight edge of the trowel followed immediately with the appropriate notched trowel according to type and size of the tile.

## Installing the tiles

It is not necessary to wet the tiles before laying; if however, the backs are very dusty, they should be cleaned.

The tiles are normally laid with firm pressure to ensure good contact with the adhesive. The open time of the adhesive obtained by mixing **Keracrete** with sand and cement in normal temperature and humidity conditions is approximately 20 minutes; unfavourable weather conditions (strong sun, wind, high temperature) or a highly absorbent substrate may shorten this open time, even quite drastically, to just a few minutes.

Wetting the substrate before applying the adhesive helps to prolong open time. It is necessary to check that the adhesive has not formed a surface skin and is still fresh. If not, re-trowel the adhesive with a notched trowel. It is inadvisable to wet the adhesive when it has formed a skin because, instead of dissolving the skin, this will form a non-adhesive film.

Adjustment of the tiles, if necessary, should

be carried out within 30 minutes following laying.

Tiling laid with **Keracrete** mixed with sand and cement must not be subject to washout or rain for at least 24 hours and must be protected from frost and strong sun for at least 5-7 days after laying.

## GROUTING AND SEALING

Wall joints can be grouted after 4-6 hours and floor joints can be grouted after 24 hours with the specific MAPEI cement or epoxy grouts, available in different colours.

Expansion joints must be sealed with the specific MAPEI sealants.

## APPLICATION PROCEDURE AS A SMOOTHING COMPOUND

### Preparing the substrate

Substrates must be level, solid, consistent and free of loose materials, grease, oils, paints, wax, etc., and sufficiently dry. Anhydrite substrates must be thoroughly dry, sufficiently hard and free of dust (check for residual moisture) and must be previously treated with **Primer G**. Substrates in very damp areas must first be treated with **Primer S**.

### Preparing the mix

**Keracrete** must be blended with a mixture of cement and clean fine sand aggregate in a ratio of 1 part by weight of **Keracrete**, 2 parts by weight of cement (class 32.5), 2 parts by weight of sand, or 1 part by weight of **Keracrete**, 1.5 parts by weight of cement (class 42.5), 2 parts by weight of sand, or alternatively 1 part by weight of **Keracrete**, 1 part by weight of cement (class 52.5) and 2 parts by weight of sand.

Mixing is performed by pouring the powder (sand and cement) into **Keracrete** latex while stirring continuously, preferably with an electrical stirrer and until a smooth paste is obtained. Leave to set for 2-3 minutes and briefly re-stir before use. Use the mixture within 90 minutes after its preparation.

### Spreading the mix

Apply the mix with a long, metal trowel. If necessary, apply several coats in quick succession as soon as the previous one sets to foot traffic.

## SET TO LIGHT FOOT TRAFFIC

Floors are set to light foot traffic after 24 hours.

## READY FOR USE

Surfaces are ready for use after 14 days. Basins and swimming pools can be filled after 21 days.

## Cleaning

Tools may be cleaned with abundant water before the adhesive sets. After setting, cleaning becomes very difficult, but can be helped by solvents such as white spirit.

## CONSUMPTION

– 1 part by weight of **Keracrete**, 2 parts by weight of cement (class 32.5), 2 parts by weight of sand,

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Type:	thick liquid
Colour:	white
Bulk density (g/cm <sup>3</sup> ):	–
Density (g/cm <sup>3</sup> ):	1.01
pH:	11.5
Dry solids content (%):	21
Brookfield viscosity (mPa·s):	12,000

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

Mixing ratio:	1 part by weight of <b>Keracrete</b> , 2 parts by weight of cement (class 32.5), 2 parts by weight of sand; or 1 part by weight of <b>Keracrete</b> , 1.5 parts by weight of cement (class 42.5), 2 parts by weight of sand; or alternatively 1 part by weight of <b>Keracrete</b> , 1 part by weight of cement (class 52.5) and 2 parts by weight of sand
Consistency of mix:	very pasty
Density of mix (kg/m <sup>3</sup> ):	1700
pH of mix:	approx. 12
Pot life:	90 minutes
Application temperature range:	from +5°C to +35°C
Open time (according to EN 1346):	20 minutes
Adjustability time:	approx. 30 minutes
Wall grouting:	after 4-6 hours
Floor grouting:	after at least 24 hours
Set to light foot traffic:	24 hours
Ready for use:	14 days (21 days for basins and swimming pools)



An example of an installation of ceramic tile in a mall - Filinvest Festival Superhall - Manila (Philippines)



Laying glass mosaics



Installation of mosaics

**Keracrete**, mixed with sand and cement, has final performances equal as a C2 class adhesive.

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- or:
- 1 part by weight of **Keracrete**, 1.5 parts by weight of cement (class 42.5), 2 parts by weight of sand,
- or alternatively:
- 1 part by weight of **Keracrete**, 1 part by weight of cement (class 52.5) and 2 parts by weight of sand.

## PACKAGING

**Keracrete** is available in 25 kg drums.

## STORAGE

**Keracrete**: 24 months. Protect from frost.

## SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

**Keracrete** is not considered dangerous according to the European regulation regarding the classification of mixtures. It is recommended to wear protective gloves and goggles and to take the usual precautions taken for the handling of chemicals. For further and complete information about the safe use of our product please refer to the latest version of our Material 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](http://www.mapei.com)**

## LEGAL NOTICE

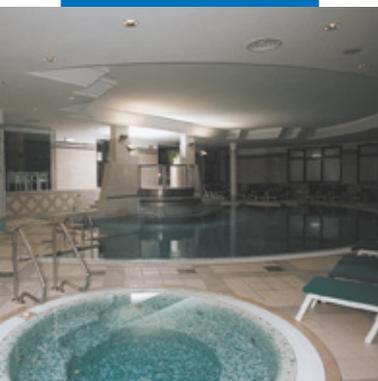
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**The most up-to-date TDS can be downloaded from our website [www.mapei.com](http://www.mapei.com).**

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



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



*An example of an installation of glass mosaics with Keracrete in a swimming pool. Park Hotel Gritti - Bardolino (Verona), Italy*



*An example of an installation a glass mosaics in a turkish bath - Park Hotel Gritti - Bardolino (Verona), Italy*



**BUILDING THE FUTURE**