

# KingTile® C 500

**Two component, highly deformable, modified cementitious ceramic tile and stone adhesive with high slip resistance and extended open time.**

## DESCRIPTION

KingTile C500 Flexible is a two-component tile adhesive consists of special blend of cement, well graded aggregate and modified additives that forms when mixed with the synthetic latex liquid admixture a high performance tile adhesive with exceptional bond strength and deformability characteristics. These characteristics make KingTile C500 Flexible ideally suitable for bonding all types of large format tiles and stone internally or externally in dry, wet or continuously submerged areas.

KingTile C500 Flexible is highly recommended for fixing tile in difficult cases such as tiling over all kind of conventional substrates that are subjected to vibration or deflections or tiling over existing tiles.

## APPLICATIONS

- 🔧 Laying large format tiles and natural stone over concrete and cement base screed, mortar and plaster substrates.
- 🔧 For tile over tile applications.
- 🔧 Laying all types of ceramic tiles and stone on all common construction substrates where slightly movements or deflections are likely.
- 🔧 For permanent fixing of all types of ceramic, porcelain and other non-porous tiles on submerged condition such as swimming pools and fountains.
- 🔧 Highly recommended for bathrooms, kitchens and other wet areas.
- 🔧 Excellent for external application such as terraces and balconies.
- 🔧 Excellent for underfloor heating systems.
- 🔧 Non-sag, can be used for vertical walls.
- 🔧 On drywall such as gypsum boards and plaster boards.

## ADVANTAGES

- 🔧 Exceptional bond strength between all types of tiles and all common construction substrates.
- 🔧 High deformability characteristic to cope with the deformation in substrates.
- 🔧 Superb performance in submerged conditions.
- 🔧 Extended open time.
- 🔧 Easy to apply, non-sag with good workability.

## TECHNICAL PROPERTIES

Colour:	White or grey
Fresh wet density:	1.70 ± 0.1 g/cm <sup>3</sup>
Open time: ISO 13007-2.4.1	30 min
Pot life:	2 hr @ 25°C
Shear strength, Porcelain tile: ANSI A118.4,5.2.4	>1.4 MPa @ 28 days
Shear strength, Porcelain tile after immersion: ANSI A118.4,5.2.3	>1 MPa @ 7 days
Shear strength, Glazed wall tile: ANSI A118.4,5.1.5	> 2.1 MPa @ 28 days
<b>Tensile adhesion strength in compliance with ISO 13007-2.4.4</b>	
Initial bond @ 28 days	>1.0 MPa
After heat exposure	>1.0 MPa
After water immersion	>1.0 MPa
After freeze/thaw cycles	>1.0 MPa
Slip: ISO 13007-2.4.2	< 0.5 mm
VOC: ASTM 2369	< 10 g/ltr (complies with LEED)

## LIMITATIONS

Do not use for:

- 🔧 Cases that require a rapid utilization for surfaces.
- 🔧 On rubber, steel or PVC substrate.

## STANDARDS

KingTile C500 Flexible complies with the following standards:

- 🔧 ISO 13007-1 and BS EN 12004 as an improved cementitious tile adhesive with slip resistance, extended open time and high deformability characteristics (C2TES2).
- 🔧 ANSI A118.4 for shear strength requirements.

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## METHOD OF USE

### Substrate preparation

All surfaces must be clean, dry and free from dust, oil, grease, paints or any loose material.

Concrete and cement based substrates must be sufficiently cured and dimensionally stable. Allow time for shrinkage and structural strain movements.

Gypsum boards, plaster boards, anhydrite screeds, or any highly absorbent cement based substrates such as hollow blocks and foam concrete must be sufficiently dry and free from dust. These substrates must be primed with Keybond 2000 diluted with water at a ratio of 1:2 by volume (1 part Keybond 2000 to 2 parts water).

Tiles should not be placed over expansion and contraction joints, these joints should be filled with a suitable flexible sealant from the KINGKRETE KingSeal range.

### Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

The liquid part of KingTile C500 Flexible should be added to a clean container. The powder is then added slowly to the liquid while mixing continuously at low speed (400 - 600 rpm).

Mixing time should be continued for 3 minutes until a uniform consistency and free of lumps mixture is obtained.

Allow a slake time for 2 - 3 minutes, then remix for additional 1 minute.

### APPLICATION

- ☐ Apply a thin layer of the adhesive onto the substrate using the flat edge of the trowel.
- ☐ Comb the adhesive with a suitable notched trowel horizontally to achieve a bed thickness of 2-5 mm.
- ☐ Place the tiles with firm pressure to ensure proper contact with the adhesive.
- ☐ It is always better to work in a manageable area that can be tiled within the open wet time of the adhesive.
- ☐ Leave the tiled surfaces for 24 hours before grouting.

## CLEANING

All tools should be cleaned immediately after finishing with water. Hardened materials can be cleaned mechanically.

## REMARKS

- ☐ Do not apply at temperature below 2°C.
- ☐ For heavy traffic or submerged areas, it is good practice to back butter the tile back surfaces with the adhesive to ensure 100% coverage.
- ☐ For large format and heavy tiles where the weight of the tiles cannot be supported by the adhesive, the installation method shall follow a bottom-up approach, and if more than two rows of tiles are to be fixed simultaneously, the tiles are to be mechanically supported using temporary anchor nails in between tile gaps or by using inclined support stud.

For further information please contact your local KINGKRETE Representation Office.

## PACKAGING

KingTile C500 Flexible is available in 15.3 kg powder part and 4.7 kg liquid part.

## YIELD

Approximately 4 m<sup>2</sup>/20 kg @ 3 mm thickness.

## STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.

## HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.



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## NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative.

KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY AND CARE

All products originating from KingKrete's manufacturing facilities are manufactured under a management system independently certified to conform to the requirements of the quality standard ISO 9001.

\* Properties listed are based on laboratory-controlled tests.

® = Registered trademark of the KingKrete-Group in many countries.

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## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this KingKrete Inc. publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

## NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by KingKrete Inc. either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not KingKrete Inc. are responsible for carrying out procedures appropriate to a specific application.

