

KingTile® C100

High performance, cementitious tile adhesive for submerged conditions with high slip resistance and extended open time

DESCRIPTION

KingTile C100 is a blend of cement, well graded aggregate and special additives that when mixed with water provides a high performance tile adhesive with excellent water resistance characteristics.

KingTile C100 is specially designed for bonding all types of ceramic tiles and natural stone in wet areas or submerged surfaces, such as swimming pools, potable water tanks and fountains.

The flexibility characteristics of KingTile C100 make it suitable for fixing large format or heavy tiles on many common construction substrates, and make it also suitable to be used in external applications and with underfloor heating systems. The extended open time and the slip resistance properties that characterize KingTile C100 make it easier and quicker to apply.

APPLICATIONS

- ☐ For permanent fixing of all types of ceramic, porcelain and other non-porous tiles on submerged condition such as swimming pools, fountains and potable water tanks.
- ☐ Highly recommended for bathrooms, kitchens and other wet areas.
- ☐ Excellent for exterior applications.
- ☐ Suitable with underfloor heating systems.
- ☐ Suitable for fixing large format tiles.
- ☐ On concrete and cement based mortar, screed and plaster.
- ☐ On drywall such as gypsum boards and plaster boards.

ADVANTAGES

- ☐ Superb for continuously submerged conditions.
- ☐ Good flexibility characteristics.
- ☐ High bond strength.
- ☐ Extended open time.
- ☐ Easy to apply, non-sag with good workability.
- ☐ Ready mixed, just requires addition of water.

LIMITATIONS

Do not use for:

- ☐ Thick bed applications.
- ☐ Tile over tile applications.
- ☐ Cases that require a rapid utilization for the surfaces.
- ☐ On metal, rubber, PVC or wood substrates.

TECHNICAL PROPERTIES

Colour:	White or grey
Fresh wet density:	1.75 ± 0.1 g/cm ³
Open time: ISO 13007-2.4.1	30 min
Pot life:	2 hr @ 25oC
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
Tensile adhesion strength in compliance with ISO 13007-2.4.4	
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)

STANDARDS

KingTile C100 complies with the following standards:

- ☐ ISO 13007-1 and BS EN 12004 as an improved cementitious tile adhesive with slip resistance and extended open time characteristics (C2TE).
- ☐ 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.

6.75 - 7.25 litres of clean fresh water for each 25 kg bag (water/powder ratio of 0.27 - 0.29 by weight) should be added to a clean container. The powder is then added slowly to the water 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 without adding any more water.

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.

REMARKS

- ☒ Do not apply at temperatures 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.

CLEANING

All tools should be cleaned immediately after use with fresh clean water. Hardened materials should be cleaned mechanically.

PACKAGING

KingTile C100 is available in 25 kg bags.

YIELD

Approximately 9 m² per 25 kg bag @ 2 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.

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.



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QUALITY AND CARE

All products originating from KingKrete's Middle East facility are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, ISO 14001 and ISO 45001.

* Properties listed are based on laboratory-controlled tests.
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Ref: KK-09021-MEA-R01 | Issue: 01.2026

STATEMENT OF RESPONSIBILITY

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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.

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