KingTile® EP100

High-performance, solvent-free, three-component epoxy tile adhesive and grout.

DESCRIPTION

KingTile EP100 is a three-component, epoxy resin-based adhesive and grout for the permanent bedding of all types of tiles, natural stone and agglomerates. It is supplied as three pre-weighed components: epoxy resin, hardener and selected fillers.

Use KingTile EP100 wherever high chemical resistance and high mechanical properties are needed.

APPLICATIONS

- Indoor and outdoor use, on walls and floors.
- Chemical-resistant, watertight laying of ceramic tiles, mosaics and bricks on renders, cement screeds, concrete and timber chipboard.
- Dairies, bakeries, soft-drink plants, industrial and canteen kitchens, butcheries, slaughterhouses and fat-processing plants.
- Battery rooms, galvanising shops, electrical substations, plant rooms, dye works, bleaching works, tanneries and paper mills.
- Laboratories and hospitals.
- Swimming pools, hot springs, hospital baths, showers and wellness areas.
- Administration buildings, hotels, schools, toilets, sewage plants, sewers, cattle stalls and stairs exposed to de-icing salt.

ADVANTAGES

- Non-absorbent and easy to clean.
- Resistant to chemicals, including a range of acids, alkalis, grease and oil.
- Watertight and a water-vapour barrier: protects moisture-sensitive substrates.
- High wear resistance: withstands rolling and grinding loads and steam-jet cleaning.
- Does not support bacterial growth in kitchens and swimming pools.
- Cures without cracking or shrinkage.
- Resistant to frost and weathering; for vertical and horizontal, internal and external use.
- High mechanical strength with a low modulus of elasticity, which makes it superior to cement-based grouts.
- Workable, easy to apply and almost odourless.
- Tools and equipment can be cleaned with warm water.

STANDARDS

KingTile EP100 meets the requirements of class R2T of EN 12004 and of ANSI A118.3.

TECHNICAL PROPERTIES

Material base:	Epoxy resin system with fine fillers and pigments
Components:	Three: resin, hardener and filler
Colour:	White, grey
Density:	1550 kg/m³
Working temperature:	+5 to +40°C
Working time*:	Approx. 45 min
Open time:	60 min @ 25°C 30 min @ 40°C
Thickness of adhesive bed:	From 2 mm
Grouting on walls*:	After approx. 4 hours
Walkable and grouting on floors*:	After approx. 16 hours
Cleaning / emulsifying*:	Within 20 - 30 min
Temperature resistance:	-20 to +60°C
Maximum service temperature:	60°C

* At +23°C and 50% relative humidity. Higher temperatures shorten, lower temperatures lengthen the times given.

CONSUMPTION

Notch size of the trowel	Consumption (mixed material)	Coverage per 5 kg unit
4 mm	Approx. 1.67 kg/m²	3 m²
6 mm	Approx. 2.50 kg/m²	2 m²
8 mm	Approx. 3.16 kg/m²	1.6 m²

The consumption rates come from laboratory trials and vary with the level and regularity of the substrate. Besides the tile size, the back profile of the tile and the surface texture of the substrate affect the consumption. The figures are for slightly profiled, non-vitrified or vitrified tiles laid on render or cement screed.

METHOD OF USE

Preparation

Remove all bond-inhibiting materials: the surface must be dry, clean and free from dust. The moisture content of the substrate must not be higher than 5%. Carry out any repairs before tiling. For advice, contact KingKrete's Technical Services Department.

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Mixing

Mix KingTile EP100 with a suitable drill and mixing paddle. Add parts A, B and C and mix until the colour and consistency are uniform.

Bedding

Apply the mixed KingTile EP100 to the substrate with a notched trowel of 4, 6 or 8 mm, depending on the size and thickness of the tile. For a solid bed, back-butter the tile with a thin layer of KingTile EP100 before pressing it into the notched bed. Lay only as much as can be tiled within the pot life.

Tiling

Press the tiles into place and align them while bedding, making sure at least 80% of the back of each tile is in contact with the adhesive. Leave joints of at least 2 mm for grouting, and 3 mm for thicker tiles.

Curing

Reactive resin products need at least 7 days at 25°C to reach their specified performance. At lower temperatures the curing period is longer.

WATCHPOINTS

- KingTile EP100 can fix tiles on walls; very heavy large-format tiles may need temporary support to stop them slipping.
- Fill movement joints with a KingKrete sealant; for normal practice refer to BS 5385.
- Tile in accordance with the relevant codes of practice.
- External temperatures of 40°C and above shorten the pot life, and the tile surface can exceed 60°C.
- Do not add water or solvents.

CHEMICAL RESISTANCE

Excellent resistance to most aqueous systems, including sewage, urine, salt water, dilute acids, oils and fats.

PACKAGING

KingTile EP100 is available in 5 kg combined units, hardener included.

STORAGE

Store the components under cover in dry, shaded conditions, protected from extremes of temperature, which can make the workability inconsistent. Do not store permanently above +30°C. Shelf life is at least 12 months in unopened containers.

When temperatures exceed 40°C during application, the working time can fall by as much as 50%.

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 immediate medical attention. Reseal containers after use. For further information, refer to the Safety Data Sheet.

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 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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