

KingFix[®] EP500

Highly flexible fast setting three component performance solvent free epoxy ceramic tile and stone adhesive and grout with chemical, abrasion and slip resistance, mould, stain and water impermeability that may be applied on humid substrates.

DESCRIPTION

KingFix EP500 is a chemical and abrasion resistant solvent free tile adhesive and grout ideal for demanding surface exposure or high traffic areas. KingFix EP500 may be applied in conditions where the substrate is humid.

KingFix EP500 is suitable for all types of ceramic tiles and stone in internal, external and submerged conditions. KingFix EP500 is a three component system consisting of a resin base, hardener and select fillers.

APPLICATIONS

KingFix EP500 is suitable for indoor, outdoor and submerged use in application areas such as:

- 📦 Swimming Pools.
- 📦 Laboratories.
- 📦 Kitchens.
- 📦 Dairy Industries.
- 📦 Meat Poultry and Food Processing Plants.
- 📦 Hospitals.
- 📦 Abattoirs.
- 📦 Pharmaceutical Plants.

ADVANTAGES

- 📦 Application on humid substrates.
- 📦 High chemical resistance.
- 📦 High abrasion resistance.
- 📦 Highly deformable.
- 📦 High slip resistance, for demanding vertical tiling.
- 📦 High bond strength.
- 📦 Mould & stain impermeable.
- 📦 Water impermeable.
- 📦 Fast setting.
- 📦 Suitable for all ceramic tiles and stones.
- 📦 Suitable for internal, external and submerged conditions.
- 📦 Available in a wide range of colours.

STANDARDS

As a tile adhesive

- 📦 KingFix EP500 complies with ISO 13007-1 and BS EN 12004 specifications, Class R2T.

TECHNICAL PROPERTIES

Pot life:	80 - 110 min @ 25°C 50 - 80 min @ 35°C
Mixed density:	1.85 ± 0.1 g/cm ³
Open time, tensile adhesion strength: ISO 13007-2, 4.1	≥ 4.0 MPa (after 20 min)
Shear adhesion strength: ISO 13007-2, 4.3.4	≥ 3.0 MPa
Shear adhesion strength: ISO 13007-2, 4.3.5	≥ 3.0 MPa (after water immersion)
Shear adhesion strength: ISO 13007-2, 4.3.8	≥ 3.0 MPa (after thermal shock)
Abrasion resistance: ISO 13007-4, 4.4	≤ 200 mm ³
Water absorption: ISO 13007-4, 4.2	< 0.1 g (after 240 min)
Shrinkage: ISO 13007-4, 4.3	< 1.5 mm/m
Compressive strength: ISO 13007-4, 4.1.4	≥ 60 MPa
Flexural strength: ISO 13007-4, 4.1.3	≥ 30 MPa
Service temperature:	- 20 to 100°C
Initial setting time: ASTM C308	7 hr @ 25°C
Full chemical cure:	7 days
Minimum application temperature:	5°C
VOC: ASTM D2369	< 50 g/ltr (complies with LEED)

As a tile grout:

- 📦 KingFix EP500 complies with ISO 13007-3 and BS EN 13888 specifications, Class RG.
- 📦 KingFix EP500 complies with ANSI A118.3 as a water cleanable tile setting and grouting epoxy.

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METHOD OF USE

Surface Preparation

1)As a tile adhesive

- ☐ Substrates should be clean and free from dust or any contamination.
- ☐ Steel surfaces shall be free from rust or other contaminants, ideally grit blasted to a near white finish in accordance to Swedish standards SA 2 ½.
- ☐ It is recommended that surfaces are in dry condition before tiling. However, KingFix EP500 can be applied on humid substrates.

2)As a tile grout

- ☐ Joint surfaces should clean and free from dust or any contamination.
- ☐ Joints should be cleaned to the full thickness of the tile or to a minimum depth of 2/3 of the tile thickness.
- ☐ Joints should be dry before grout filling.

MIXING

To ensure proper mixing, a mechanically powered mixer or drill fitted with a suitable paddle should be used. Stir the base and the hardener individually to disperse any settlement.

The entire contents of the base and hardener should be poured into a suitable size container and mixed mechanically for 2 minutes. Add the filler to the base/ hardener mixture and mix for another 3 minutes until a uniform colour is achieved.

PLACING AND FINISHING

1)As a tile adhesive

Spread the mixed adhesive to the substrate using a notched trowel. Apply with pressure a 1 to 2 mm coat with pressure using the flat face of the notched trowel onto the substrate.

Comb diagonally additional mixed adhesive up to a 3 mm total maximum thickness with the notched side of the notched trowel. Do not apply large areas of adhesive that cannot be covered within the open wet time of the adhesive.

2)As a tile grout

Use a masking tape on joint edges to protect tiles. Fill the mixed grout into the joints using rubber trowel or by using hand operated gun and cartridges. Excess grout should be cleaned with a proper wet cloth within the material pot life.

CHEMICAL RESISTANCE

ISO 13007-2:2010 after submersion in the following chemicals:

	After 7 days full immersion	After 28 days full immersion
Ammonia 10% - Liquid	R	R
Citric Acid 10%	R	R
Diesel fuel		
Hydrochloric Acid 10%	R	R
Kerosene	R	R
Lactic Acid 10%	R	R
Nitric Acid 10%	R	R
Phosphoric Acid 37%	RS	RS
Potassium hydroxide 50%	R	R
Sulfuric Acid 10%	R	R
Vinegar 5%	R	R
Water - Distilled	R	R
Chlorinated water	RS	RS
Water - Fresh	R	R
Water - Sea, Salt	R	R
Xylene	R	-

Note: Slight discoloration may occur without affecting the performance.

WORKING CONDITIONS

KingFix EP500 should not be applied at temperatures below 5°C.

CLEANING

Cleaning should be commenced immediately before the grout reaches initial setting. After initial set, product may be removed either by using solvent or by mechanical means but with great difficulty.

PACKAGING

KingFix EP500 is available in 6 kg packs (3.25 ltr) and 12 kg packs (6.5 ltr).

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YIELD

When used as a tile adhesive, each 6 kg pack shall cover 3.2 m² at 1 mm thickness.

When used as tile grout The approximate yield of the grout can be calculated as per the following equation:

$$\text{Yield (m}^2\text{/kg)} = \frac{5.1}{\text{WD} \left(0.02 + \frac{1}{L} + \frac{1}{H}\right)}$$

Where:

L: Tile length (cm)

H: Tile width (cm)

D: Average joint depth (mm)

W: Average joint width (mm)

Note: Grout yield is subject to ± 15% tolerance.

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.

QUALITY AND CARE

All products originating from KingKrete's Qatar facility 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.

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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.