KINGKRETE®
We Create Future

KingBond® 50E

Epoxy bonding agent for concrete repairs and for bonding concrete to concrete, steel and granolithic toppings.

DESCRIPTION

KingBond 50E is a permanent epoxy adhesive for bonding renders, granolithic toppings and concrete to concrete, internally or externally. It tolerates a degree of moisture before and during curing, and is insoluble once cured.

Its ultimate bond strength is greater than the tensile strength of concrete. KingBond 50E does not shrink and gives an even, stress-free bond.

USES

KingBond 50E can be applied to clean, sound and durable surfaces, including:

- Steel.
- Glazed tiles and bricks.
- Ceramic and quarry tiles.
- Terrazzo tiles and floors.
- Smooth and worn granolithic paving.
- Old and worn concrete.
- Engineering and semi-engineering bricks.

ADVANTAGES

- High strength.
- Non-shrink.
- Moisture tolerant.
- Durable.
- Resistant to chemical attack.
- Supplied in pre-weighed units.

STANDARDS

ASTM C881, Type II, Grade 2, Classes B and C.

METHOD OF USE

Preparation

Surfaces must be clean, sound and durable. Remove oil, grease and fat first; then remove loose particles, laitance, weak or friable concrete, dust, curing compounds, floor hardeners, bitumen and paint by chipping, grit blasting, mechanical scarifying or acid etching until a sound base is reached. Abrade glossy surfaces, and degrease and grit blast or scarify surfaces impregnated with mould oil.

Remove visible mould, lichen or algae and treat the surface with a fungicidal wash. New concrete must have cured until its shrinkage and moisture movement are low.

TECHNICAL PROPERTIES

Mixed density (ASTM D1475):	1485 kg/m³ @ 25°C
Open time (ASTM D2471):	6 hours @ 25°C 2.5 hours @ 40°C
Tack-free time (ASTM D2471):	9 hours @ 25°C 5 hours @ 40°C
Full cure (ASTM C661):	7 days
Slant shear bond strength (ASTM C882):	> 20 MPa
Compressive strength (ASTM D695):	> 50 MPa
Water absorption (ASTM D570):	< 0.1%

MIXING AND APPLICATION

Mixing

Transfer the entire contents of the smaller KingBond 50E reactor container into the larger base tin and mix thoroughly with a stout palette knife, or a slow-running drill with a paint-mixing paddle, until uniform. This normally takes about three minutes. Do not mix part units, and do not thin.

Application

Apply KingBond 50E evenly over the whole surface with a clean, short-haired paint brush or a laying-on trowel.

Leave KingBond 50E to stand before overlaying. The delay depends on the surface and the conditions, but is typically 60 minutes at 25°C or 45 minutes at 40°C. Protect it from contamination during this time, particularly on horizontal surfaces.

Renders and screeds

Once the render or screed is placed over KingBond 50E, normal methods of working can be used. Granolithic paving and sand-cement renders and screeds must be cured, with a fine spray of clean water and polythene sheeting or, more effectively, with a curing membrane from the KingKure range. Without curing, the render or screed may crack and craze.

Carry expansion joints in the substrate through the render or screed, and fill them with a two-part polysulphide sealant such as KingSeal PS2 GG.

Temperature

Low temperatures slow the setting and curing of KingBond 50E, so avoid working in cold weather where possible. KingBond 50E cures slowly at low temperatures; 7 - 10°C

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can be taken as the lowest temperature at which vertical rendering can proceed satisfactorily without shuttering.

CLEANING

Clean tools with KingKrete solvent while KingBond 50E is still wet or tacky. Once set hard, it can only be removed by chipping or burning.

COVERAGE

3.0 - 3.5 m²/kg, depending on the substrate profile.

PACKAGING

KingBond 50E is available in 1 kg and 5 kg units containing the base resin and the reactor component.

STORAGE

Store under cover, out of direct sunlight and protected from extremes of temperature. In tropical climates, store the product in an air-conditioned environment.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage and disposal 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 (which can also be tainted by vapour until the product has fully cured). 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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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.

KingKrete Middle East
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