KINGKRETE®
We Create Future

KingProof® C50

Two-component, acrylic-modified, flexible cementitious waterproof coating.

DESCRIPTION

KingProof C50 is a two-component, acrylic-modified cementitious coating that requires only on-site mixing to form an ideal product for waterproofing and resurfacing concrete, masonry and most other construction substrates. Simply applied by stiff brush, roller or trowel, it forms a waterproof, flexible coating that provides an effective barrier to waterborne salts and atmospheric gases. Once applied, it forms a hard-wearing, seamless, waterproof membrane suitable for roofs and foundation protection.

APPLICATIONS

- Refacing and evening out variations in concrete surfaces
- Waterproof lining for water-retaining structures
- Coating of seawater channels
- Sealing and coating of tie-bar holes to ensure water tightness
- Waterproofing and protection against brackish water
- Foundation protection
- Waterproof coating for roofs
- Backing to marble and granite to prevent water ingress and surface staining
- Protection of concrete against carbonation and chloride attack
- Pedestrian walkways in marine areas

ADVANTAGES

- Waterproof
- Excellent adhesion – bonds to porous and non-porous surfaces
- Flexible
- Non-toxic and suitable for contact with potable water
- Suitable for light pedestrian traffic
- Breathable – repels water while allowing the substrate to breathe
- High resistance to chloride-ion diffusion
- Can be applied to 24-hour-old concrete, giving immediate protection instead of the 7 – 28 day cure required by conventional coatings

COMPOSITION

KingProof C50 is composed of specially selected cements, silica sand and reactive fillers supplied in powder form, together with a liquid component of blended acrylic copolymers and wetting agents.

TECHNICAL PROPERTIES

Colour	J-Light Grey, K-White, H-Dark Grey
Density	1,826 kg/m³
Toxicity (BS 6920)	Non-toxic – suitable for contact with potable water
Chloride-ion diffusivity	Not measurable after 24 months of testing
Depth of water penetration under pressure (BS EN 12390-8)	Nil
Liquid water permeability (BS EN 1062-3)	< 0.1 kg/(m²·h$^{0.5}$)
Carbon-dioxide permeability, equivalent air-layer thickness Sd (BS EN 1062-6)	> 50 m
Adhesive pull-off strength (ASTM D4541-A2)	2.4 MPa
Tensile strength (ASTM D412)	2.0 MPa
Elongation (ASTM D412)	50%
Crack bridging (CR-TM 41.1)	2 mm
Waterproofing (28 days, untreated substrate at 0.3 MPa)	Pass – resisted 60 m positive hydrostatic head
Anti-carbonation (at 1.8 kg/m²)	Equivalent air-layer thickness R = 92 m (minimum accepted 50 m)

STANDARDS

KingProof C50 has been tested as suitable for use in contact with potable water in accordance with BS 6920: Part 1: 2000.

CHEMICAL RESISTANCE

KingProof C50 provides an effective barrier to waterborne salts such as chlorides and sulphates; independent assessment has shown that even after 12 months of constant immersion the chloride-ion diffusion coefficient could not be measured. It has outstanding wear and weather resistance and good resistance to sodium hydroxide, calcium chloride and de-icing salts, and coated surfaces exhibit good resistance to mild acids.

METHOD OF USE

Surface Preparation

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As with all coating systems, surface preparation is of prime importance. Remove all grease, oil, dust, residual curing compound, mould-release agent and any other contaminant that could impair adhesion. Laitance should preferably be removed by light sweep blasting or hydro-jetting; mechanical wire brushing may be suitable for small areas. Cut spalled concrete back to sound concrete and make good with a suitable KingKrete cementitious repair mortar such as KingRep C60. Remove conventional curing compounds before application, and firmly bed and grout roofing tiles beforehand.

Mixing

KingProof C50 is supplied in pre-measured units and should be mixed on site in clean containers. Slowly add the powder to the liquid and mix with a slow-speed drill fitted with a suitable paddle. Mix and use: do not mix more material than can be used within one hour. Part packs may be prepared by mixing 2 volumes of powder to 1 volume of liquid. Do not re-temper with water.

Application

Do not apply to dry concrete. Saturate the surface with clean water and apply while still visibly damp but free of standing water, using a short, stiff-bristle brush or roller; trowel application may be undertaken where required. For heavy 6 – 10 mm depressions and honeycombing, use less gauging liquid and mix to a stiffer consistency. Where more than one coat is required, apply each subsequent coat after the previous coat has dried; for general resurfacing each coat should be a minimum of 1 mm thick. Spray application is recommended for large areas.

COVERAGE

Approximately 1.8 kg/m² per 1 mm thickness.

PACKAGING

KingProof C50 is available in 20 kg double packs.

STORAGE

Store out of direct sunlight, clear of the ground on pallets and protected from rainfall; avoid excessive compaction. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice, consult the KingKrete Technical Services Department.

HEALTH AND SAFETY

As with all chemical products, avoid contact with the eyes, mouth and skin and keep away from foodstuffs. Treat any splashes to the eyes and skin immediately and, if accidentally ingested, seek immediate medical attention. 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.
® = 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.

KingKrete Middle East
www.kingkrete.com

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