

# KingCoat<sup>®</sup> E100

**Nontoxic solvent free epoxy protective coating for concrete and metal.**

## DESCRIPTION

KingCoat E100 is a solvent free, non-toxic; high build epoxy resin protective coating with outstanding chemical and mechanical properties. KingCoat E100 is supplied as a two component product in pre-weighed base and hardener packs, ready for site mixing.

## APPLICATIONS

KingCoat E100 is designed for internal applications such as:

Heavy duty protective coating for concrete and steel.

Internal protective lining for potable water concrete or steel tanks.

Heavy duty wall and floor coating in food processing plants, grain silos, dairies, breweries, hospitals, pharmaceutical industries and car parks.

High chemical resistant protective coating for power stations, oil refineries, and sewage treatment plants.

## ADVANTAGES

Approved for use in contact with potable water.

Produces a seamless, glossy, glass-like surface that is both easy to clean and does not induce bacterial and fungal growth.

Excellent resistance to a variety of chemicals.

Easy to clean with a smooth, hard and glossy finish.

Non-toxic.

Exhibits good mechanical properties.

Resistant to sewage effluents.

## STANDARDS

KingCoat E100 complies with the requirements of BS 6920:2000.

## METHOD OF USE

### Substrate Preparation

#### Concrete surfaces:

The Substrate should be sound, clean and free from contamination. Surface Laitance should be removed by grit blasting or water jetting. All exposed blow holes should be filled with epoxy paste using KingRep EP10.

## TECHNICAL PROPERTIES

Specific gravity:	1.60 ± 0.1
Solid content:	100%
Colour:	Various
Bond strength over C25/30 concrete: ASTM D4541	≥ 2 MPa @ 7 days (substrate failure)
Pot life:	100 min @ 25°C 45 min @ 35°C
Re-coatable time:	Minimum 4 hr @ 25°C Maximum 24 hr @ 25°C
Full cure:	After 7 days @ 25°C
Chemical resistance:	Refer to DPC chemical resistance table
Compressive strength: BS 6319-2	≥ 80 MPa @ 7 days
Tensile strength: BS 6319-7	≥ 25 MPa @ 7 days
Flexural strength: ASTM D580	≥ 30 MPa @ 7 days
Taber abrasion resistance: (1000 g, 1000 cycle) ASTM D4060, weight loss CS17 wheel	70 milligram
VOC: ASTM D2369	< 20 g/ltr (complies with LEED)

### Steel surfaces:

All surfaces should be grit blasted to reach a bright finish meeting the requirement of Swedish Standard SA 2 1/2.

### Priming

KingCoat E100 is designed to be applied over wellprepared steel and concrete substrates directly without a primer. If the application will be taken place over other substrates, please consult KINGKRETE's Technical department for advice.

### Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with a suitable paddle should be used. Stir the content of each component separately to disperse any settlement. Add the entire content of the hardener to the base and mix for 3 minutes and until a uniform colour and consistency are achieved.

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## APPLICATION

KingCoat E100 can be applied by brush; roller or airless spray machine. The first coat should be applied to obtain a continuous uniform coating. The second coat should be applied within the over coating time to achieve the maximum adhesion between the two coats.

### Notes:

- ☐ KingCoat E100 should not be applied over existing coatings. However it can be applied on top of itself, by maintaining the mentioned over coating time.
- ☐ Application should not be undertaken if the temperature is below 5°C, nor when the relative humidity exceeds 90%.
- ☐ Application should not be carried out, when there is standing or running water.
- ☐ KingCoat E100 is not colour stable when exposed to direct sun light nor when in contact with some chemicals. However this colour change does not affect the performance of the coating.

Precaution is recommended if the application is taking place at high temperatures (above 30°C).

## CLEANING

All tools should be cleaned immediately after application using KINGKRETE Solvent. Hardened materials must be cleaned mechanically.

## PACKAGING

KingCoat E100 is available in 5 kg packs (3.1 litre) and 20 kg (12.5 litres) packs.

## COVERAGE

Approximately 0.30 - 0.35 kg/m<sup>2</sup> per coat. Two coats should be applied to achieve a total of 400 microns dry film 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.

## Occasional Spillage.

Chemical Resistance after full cure (7 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)

### Organic acids

Oleic Acid sat.	RS
Citric Acid 25%	R
Vinegar 10%	RS

### Inorganic bases

Sodium Hydroxide 50%	R
Ammonia Solution 10%	R
Potassium Hydroxide 50%	R

### Aqueous solutions

Sodium Chloride sat	R
Tap water	R
Chlorinated water	R
Dead sea water	R

### Solvents

White spirit	R
Xylene	R
Toluene	R
Acetone	R

### Oils & Fuels

Benzyl alcohol	R
Brake fluid	R
Engine oil	R
Diesel	R
Kerosene	R
Detergents & Soaps	R

### Inorganic acids

Sulphuric Acid 25%	RS
Phosphoric Acid 20%	RS
Hydrochloric Acid 10%	R
Nitric Acid 25%	RS

## 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.

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## 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.

® = Registered trademark of the KingKrete-Group in many countries.

## CHEMICAL RESISTANCE

**Based on test method ASTM D1308, immersion in the below chemicals. After 7 days**

Nitric Acid 10%	RS
Phosphoric Acid 20%	RS
Hydrochloric Acid 10%	RS
Vinegar 5%	RS
Sulphuric Acid 25%	RS
Ammonia Solution 10%	R
Tap water	R
Sodium Chloride Sat.	R
Diesel	R
Engine oil	R
Brake fluid	R

*R: Resistant*

*RS: Resistant with slight discoloration*

*SS: Slight softening*

## KingKrete-Qatar/KingCoat\_E100\_02/v2/07\_18

### 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.

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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.