KingCoat ® CR100

High chemical resistant solvent free epoxy protective coating for concrete and metal.

DESCRIPTION

KingCoat CR100 is a solvent free, high build epoxy resin protective coating with outstanding chemical and mechanical properties.

KingCoat CR100 is supplied as a two component product in pre-weighed base and hardener packs, ready for site mixing.

APPLICATIONS

KingCoat CR100 is designed for internal applications such as:

- Heavy duty indoor protective coating for concrete and steel.
- Heavy duty wall and floor coating in food processing plants, grain silos, dairies, breweries ,hospitals, and pharmaceutical industries.
- High chemical resistant protective coating for power stations, oil refineries, and sewage treatment plants.

ADVANTAGES

- Solvent free and low odour.
- Excellent resistance to mould and fungus growth.
- Excellent resistance to a variety of chemicals.
- Easy to clean with a smooth, hard and glossy finish.
- Excellent abrasion resistance.
- Exhibits good mechanical properties.
- Resistant to sewage effluents.
- Excellent adhesion to concrete and steel.

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.

Steel surfaces:

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

TECHNICAL PROPERTIES

Specific gravity:	1.3 ± 0.05 g/cm^3
Solid content:	100%
Colour:	Red, green & cement grey
Abrasion resistance:	Excellent
Bond strength over C25/30 concrete: ASTM D4541-85	> 2 MPa
Pot life:	40 - 50 min @ 25°C 30 - 40 min @ 35^{o}C
Re-coatable time:	Between 5 - 16 hr @ 25^{o}C
Full cure:	After 7 days @ 25°C 4 days @ 35^{o}C
Compressive strength: BS 6319, Part 2	> 65 MPa @ 7 days
Tensile strength: BS 6319, Part 7	> 15 MPa @ 7 days
Flexural strength: BS 6319, Part 3	≥ 30 MPa
Taber abrasion resistance: (1000 g, 1000 cycle) ASTM D4060, weight loss CS17 wheel	150 milligram
Light foot traffic:	1 day @ 25^{o}C
Application temperature:	5 to 35^{o}C
Service temperature:	-20 to 50^{o}C
Water absorption: ASTM D570	< 0.1%
VOC:	< 10 g/ltr

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.

KingCoat® CR100

APPLICATION

Smooth Finish

KingCoat CR100 can be applied by brush; roller or airless spray machine. The first coat should be applied at a film thickness of 200 micron to obtain a continuous uniform coating.

The second coat should be applied within the over coating time at 200 micron film thickness to achieve the maximum adhesion between the two coats.

Antislip Finish

The first coat (base coat) should be applied at a thickness of 250 microns and whilst wet it should be fully blinded with the preferred size of Antislip Aggregates.

Once the base coat reachs full cure; normally next day; all excess aggregates should be removed. The top coat should be applied at minimum thickness of 250 - 500 microns depending on the Antislip Aggregate size used.

Notes:

- *KingCoat CR100 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 5ºC, nor when the relative humidity exceeds 90%.*
- *Application should not be carried out, when there is standing or running water.*
- *KingCoat CR100 is not designed for outdoor applications and is not colour stable when exposed to direct sunlight 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 30ºC).

CLEANING

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

PACKAGING

KingCoat CR100 is available in 5 kg packs (3.85 litre).

CHEMICAL RESISTANCE

Based on test method ASTM D1308, after 7 days submersion in the below chemicals:	
Hydrochloric Acid 36%	R
Hydrochloric Acid 36%*	RS
Sulphuric Acid 10%	RS
Phosphoric Acid 20%	R
Nitric Acid 10%	RS
Lactic Acid 10%	R
Citric Acid 10%	R
Sodium Hydroxide 40%	R
Sodium Hydroxide 48%*	RS
Oleic Acid (sat.)	R
Vinegar 10%	R
Potassium Hydroxide 50%	R
Ammonia Solution 10%	R
Water	R
Chlorinated water	R
Sea water	R
Brake fluid	R
Diesel	R
Kerosene	R

** Tested for submersion @ 50°C.*
R: Resistant
RS: Resistant with slight discoloration

COVERAGE

For Smooth finish

Approximately 19 m² per pack per coat to give 200 microns dry film thickness. Two coats should be applied to achieve 400 microns dry film thickness.

For Antislip finish

Depending on the Antislip Aggregate size used the consumption will vary from 0.4 - 0.5 kg per m^2 for the base coat.

KingCoat® CR100

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.

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

Chemical Resistance after full cure (7 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)	
Phosphoric Acid 55%*	R
Hydrochloric Acid 36%	RS
Sulphuric Acid 10%	R
Phosphoric Acid 20%	R
Nitric Acid 10%	RS
Lactic Acid 10%	R
Citric Acid 10%	R
Oleic Acid (sat.)	RS
Potassium Hydroxide 50%	R
Ammonia Solution 10%	R
Brake fluid	RS
Tap water	R
Chlorinated water	R

**Tested at 24 hr spot test.*
R: Resistant
RS: Resistant with slight discoloration

KingKrete Trading & Contracting W.L.L
Doha – State of Qatar
www.kingkreteinc.com