KingCoat ® CT100

Heavy duty solvent free coal tar modified epoxy based flooring system

DESCRIPTION

KingCoat CT100 is a heavy duty solvent free coal tar modified epoxy flooring system. The product comprises of a base, hardener and graded filler, which when mixed form a fluid, homogenous slurry. After spreading KingCoat CT100 slurry and while still wet, hard wearing silica aggregates should be broadcasted onto the slurry. KingCoat CT100 cures to a durable, anti-slip, extremely hard wearing surface. Depending on the used Antislip Aggregate, final dry thickness can be (3 - 3.5 mm) for medium traffic or (5 - 5.5 mm) for heavy traffic.

APPLICATIONS

KingCoat CT100 is used to provide a hard wearing anti-skid surface for concrete and steel floors for a wide range of applications such as:

- Car parks.
- Roads and bridges.
- Offshore oil platforms.
- Ship decks.
- Industrial floors.
- Helicopter decks (pad).

ADVANTAGES

- Hard wearing system.
- Non-slip.
- Solvent free.
- Lightweight.
- Fast cure.
- Waterproof.
- Flexible.
- Resists a wide range of chemicals, consult KINGKRETE technical department for more details.

STANDARDS

KingCoat CT100 complies with EN 13813, SR-B2.0-AR0.5- IR10.

TECHNICAL PROPERTIES

Specific gravity:	1.75 ± 0.05
Working life:	60 - 80 min @ 15°C 40 - 50 min @ 25°C 20 - 30 min @ 35°C
Foot traffic:	After 24 hr @ 25°C
Vehicular traffic:	After 48 hr @ 25°C
Full cure:	7 days @ 25°C 4 days @ 35°C
Compressive strength: BS 6319-2	≥ 45 MPa @ 7 days
Flexural strength: EN 13892-2	≥ 25 MPa @ 7 days
Tensile strength: BS 6319-7	≥ 8 MPa @ 7 days
Maximum wear depth: BS EN 13892-4	0.01 mm
Bond strength: BS EN 13892-8	> 2 MPa (concrete failure)
Impact resistance: ISO 6272-2	Pass to 10 N.m (on concrete substrate)
Water permeability (5 bar): DIN 1048	Nil
Water absorption: ASTM D570	Nil
VOC: ASTM D2369	< 10g/ltr

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METHOD OF USE

Substrate Preparation

The substrate must be clean, dry, even, dense and free from oil, grease, dust and other contaminants. A clean surface will ensure maximum adhesion between the substrate and the coating.

Concrete floors must have a minimum compressive strength of 25 N/mm² and a maximum concrete relative humidity of 80% (max. moisture content of 4%), relative humidity can be measured with hygrometers.

Concrete relative humidity should be less than 80% for concrete of 28 days old or more, for low W/C ratio concrete floors, 80% hygrometer reading or less can be achieved before 28 days age.

When applied to steel substrates, all surfaces should be clean and free from rust and scale. Make sure that the surfaces are grit blasted to reach a bright finish meets the requirement of Swedish Standard to a minimum of SA 2 ½ grade.
Contact KINGKRETE Technical Department for further details.

Surface Preparation

Unsound layers and contaminated concrete surfaces must be prepared using mechanical surface removing equipment. For deeply contaminattion by oil or grease, such areas should be treated with hot compressed air.

Priming

Concrete and steel substrates should be primed with KingFloor Primer/Primer S. Use lamb's wool roller to apply the primer. The primer should be allowed to cure for 24 hours. More than one coat may be required for highly porous or textured surfaces.
For more information about the best priming procedure, contact KINGKRETE's Technical Department.

MIXING

To avoid inconsistent workability and pot life, make sure the materials to be used are stored in a shaded area and protected from extremes of temperatures for at least 24 hours prior to application. Prior to mixing, stir the liquid components of KingCoat CT100 (base & hardener), mix thoroughly for at least 3 minutes using a forced action mixer. Add the filler and mix until a homogenous mixture is formed, this will take about 4 - 5 minutes.

Chemical Resistance (ASTM D543)	
Acids (m/v)	
Hydrochloric Acid 10%	Resistant
Nitric Acid 10%	Resistant
Phosphoric Acid 10%	Resistant
Sulphuric Acid 10%	Resistant
Alkalis (m/v)	
Ammonia 15%	Resistant
Sodium Hydroxide 25%	Resistant*
Solvents and organics	
Oils, vegetables & minerals	Resistant
Ferric Chloride 15%	Resistant
Kerosene	Resistant
White spirit	Resistant
Xylene	Resistant
Acetone	Resistant
Aqueous solutions	
Water	Resistant
Sea water	Resistant
Raw sewage	Resistant
Sodium chloride sat.	Resistant
Chlorinated water	Resistant
Fuels	
Brake fluid	Resistant
Diesel	Resistant
Kerosene	Resistant
UV resistance	Resistant*

Note: Slight discoloration in some cases may occur without affecting the performance of the coat.

SLURRY LAYING

Work in lanes of width not exceeding 3 m. Spread the slurry on the prepared surface at the required thickness by rack. Care should be taken when joining the lanes, to achieve a smooth connection. It is recommended to mask off edges with tape which is then removed while KingCoat CT100 is still wet.

Dressing the silica aggregate should be applied immediately after laying of KingCoat CT100 slurry. Aggregate should be allowed to fall vertically until the surface is saturated and totally covered.

Remove excess aggregate after initial curing of KingCoat CT100. Excess aggregates can be reused if not contaminated during removal.

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POINTS TO BE CONSIDERED

- KingCoat CT100 should not be applied on to surfaces known to suffer from damp rising.
- Ramps should be treated with larger size silica aggregates.
- KingCoat CT100 should not be applied at temperatures below 10°C or where ambient relative humidity exceeds 80%.

CLEANING

KingCoat CT100 can be removed with KINGKRETE solvent prior to setting.

PACKAGING

KingCoat CT100 is available in 30 kg packs. KingFloor Primer is available in 5 kg packs.
Silica aggregates is available in 25 kg bags.

COVERAGE

KingCoat CT100: 6.1 kg/m² @ 3.5 mm thickness, and 9.6kg/ m² @ 5.5 mm thickness.
KingFloor Primer: 5 m²/kg @ 200 microns DFT.
Silica aggregates: 5 - 6 kg/m² using Antislip Aggregate #2, and 6.5 - 7.5 kg/m2 using Antislip Aggregate #0.

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 manufacturing facilities 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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KingKrete North America
www.kingkrete.com