KingFloor ® EP25

Solvent based epoxy resin floor and wall coating.

DESCRIPTION

KingFloor EP25 is a hard wearing, solvent based, epoxy resin coating, designed to provide a hard, semi-gloss coating to concrete floors, walls, ceiling, steel and other substrates.

Moreover, KingFloor EP25 can be used as a primer for solvent based and solvent-free high build epoxy coatings.

APPLICATIONS

KingFloor EP25 is used as protective, decorative and hard wearing coating for floors or walls in many applications including:

- Soft drink and beverage production areas.
- Dairies production areas.
- Show rooms.
- Industrial and commercial kitchen walls.
- Warehouses.
- Hospitals and pharmaceutical factory walls.
- Fish and meat processing plant walls.
- General food processing and manufacturing plants.
- Light vehicular traffic areas.

Also KingFloor EP25 can be used as a primer for solvent based and solvent-free high build epoxy coatings.

ADVANTAGES

- Can be used on concrete, steel, galvanized steel substrates.
- Excellent chemical and mechanical resistance.
- Available in a wide range of attractive colours.
- Cost effective.
- Easy application.
- Produces a seamless semi-gloss surface that is both easy to clean and does not induce bacterial and fungal growth.

STANDARDS

KingFloor EP25 complies with BS 476, Part 7: 1987, Class 1 Spread of Flame.

TECHNICAL PROPERTIES

Mixed density:	1.35 ± 0.05 g/cm³ @ 25°C
Pot life:	3 hr @ 25°C 1 hr @ 35°C
Minimum time between coats:	6 hr @ 25°C 4 hr @ 35°C
Maximum time between coats:	24 hr @ 25°C 16 hr @ 35°C
Dry film thickness:	70 - 80 microns/coat
Initial cure:	24 hr @ 25°C 12 hr @ 35°C
Full curing:	10 days @ 25°C 7 days @ 35°C
Bond strength: ASTM D4541-95	> 2.2 MPa (concrete failure)
Water absorption: ASTM D570	< 0.5%
Scrub resistance: ASTM D2486	> 5000 cycle
Adhesion: ISO 2409:1992	GT1
Opacity: (Grindo pac)	5 m²/ltr
Taber abrasion resistance: (1000 g, 1000 cicle) ASTM D4060, weight loss CS17 wheel	70 - 80 milligram
Mixed viscosity:	200 ± 20 poise @ 25°C
Gloss @ 60°: ISO 2813	30 - 35
Fineness of grind: ASTM D1210	4 Hegman
Non-volatile content by weight:	70 ± 2%
Dry time, dry hard: ASTM D1640	7 - 8 hr
VOC: ASTM D2369	< 400 g/ltr (complies with LEED)

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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 by using hygrometers. Concrete relative humidity should be less than 80% for concrete of 28 days old or more.

Surface Preparation

Unsound layers and contaminated concrete surfaces must be prepared using mechanical surface removing equipment.

Acid etching can be used only in well ventilated areas. Areas deeply contaminated by oil or grease, such areas should be treated by hot compressed air.

Mixing

To avoid inconsistent workability and pot life, make sure that the materials to be used are stored in shaded area and protected from extremes of temperatures, for at least 24 hours prior to application. Prior to mixing, stir individual components of the Base and Hardener.

Add the entire content of the hardener container to the base and mix thoroughly for at least 3 minutes.

Note: In certain cases the Base of the product can be supplied uncoloured and needs the addition of a colour pack. In such cases, mix the components of the colour pack and Base for 2 minutes, then add the entire content of the Hardener to the mixture and mix thoroughly for 3 minutes.

COATING

Use brush or lambs wool roller, or airless spray machine to apply the mixed KingFloor EP25 onto the prepared surfaces.
Apply 2 coats of KingFloor EP25 at 5.5 - 6.5 m²/kg/coat, second coat should be applied at a right angle to the first coat.

Occasional Spillage. Chemical Resistance after full cure (7 days @ 25ºC), ASTM D1308 (spot test @ 1 hr)	
Organic acids	
Lactic Acid 10%	R
Oleic Acid sat.	R
Citric Acid 25%	R
Acetic Acid 10%	R
Vinegar 10%	R
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	RS
Engine oil	R
Diesel	R
Kerosene	R
Detergents & Soaps	R
Inorganic acids	
Sulphuric Acid 25%	R
Phosphoric Acid 20%	RS
Hydrochloric Acid 10%	R
Nitric Acid 10%	R

R: Resistant
RS: Resistant with slight discoloration
SS: Slight softining

The second coat may be applied as soon as the first coat has initially dried. Drying time will depend on the substrate and the ambient conditions. If the over coating time is exceeded the first coat must be abraded with sand paper prior to the application of the second coat. Adequate ventilation must be provided to ensure that necessary drying and curing of the material is achieved.

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REMARKS

- Higher traffic areas should receive extra coats or a higher build system.
- KingFloor EP25 should not be applied at temperatures below 10°C or where ambient relative humidity exceeds 85%.
- KingFloor EP25 should not be applied onto surfaces known to suffer from rising dampness.
- In case of spray applications, airless spray machines should be used.

CLEANING

Tools and equipment can be cleaned with KINGKRETE Solvent. Dried KingFloor EP25 may be removed mechanically.

PACKAGING

KingFloor EP25 is available in 5 kg packs (3.85 litre) and 20 kg packs (15.4 litre).

COVERAGE

The coverage rate is 30 m²/5 kg pack per coat to achieve dry film thickness of 70 - 80 microns per coat. When used as a primer apply KingFloor EP25 in one coat at a rate of 25m²/5 kg achieving a thickness of around 90 microns.

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
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