KingFloor ® EPWB

High build flexible chemical resistant epoxy polysulphide coating.

DESCRIPTION

KingFloor EPWB is a solvent free, flexible, high build epoxy polysulphide resin coating. KingFloor EPWB is available in two grades; KingFloor EPWB-P for use in contact with potable water reservoirs and KingFloor EPWB-S for use in sewage treatment tanks, chemical plants, etc.

KingFloor EPWB has outstanding chemical and mechanical properties to protect concrete and steel from aggresive environment or wide range of chemicals.

APPLICATIONS

KingFloor EPWB is designed for variety of applications such as:

- Heavy duty protective and waterproof coating for concrete and steel.
- KingFloor EPWB-P is suitable for use with potable water retaining structures and reservoirs.
- KingFloor EPWB-S is suitable for use in reservoirs containing sewage sludge, chemical, oils and fuel.
- Heavy duty wall and floor coating in food processing plants, grain silos, dairies, breweries and car parks.

ADVANTAGES

- Non-toxic and suitable for use in contact with potable water (for grade KingFloor EPWB-P).
- 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, oils and fuel.
- Excellent abrasion and impact resistance.
- UV and weather resistant.
- Flexible; able to bridge cracks up to 1 mm.

STANDARDS

- KingFloor EPWB complies with the requirements of EN1504-2 Surface Protection Systems for Coatings (C) Principles 2.2 and 5.1.
- KingFloor EPWB-P complies with the requirements of BS 6920:2000.

TECHNICAL PROPERTIES

Colour:	KingFloor EPWB-P: Light grey Strongcocat EPW-S: Black
Volume solids:	100%
Mixed density:	1.5 ± 0.05 g/cm³ @ 25°C
Pot life:	90 min @ 25°C 65 min @ 35°C 40 min @ 45°C
Tensile strength: ASTM D412	7.5 MPa
Time between coats:	24 hr @ 25°C 16 hr @ 35°C 10 hr @ 45°C
Full cure:	7 days @ 25°C 4 days @ 35°C 2 days @ 45°C
Elongation: ASTM D412	> 20% @ 7 days
Shore A hardness: ASTM D2240	> 80
Shore D hardness: ASTM D2240	> 60
Bond strength to concrete: ASTM D4541	2 MPa (concrete failure)
Service temperature:	-10 to 70°C
UV resistance:	Good
Abrasion: ASTM D4060, CS-17 wheel 500 g 100 500 1000	 10 mg 20 mg 40 mg
Water absorption: ASTM D570	< 0.3%
VOC:	< 30 g/ltr

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.

MIXING

To ensure proper mixing, a mechanically powered

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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 contents of the hardener to the base and mix for 3 minutes and until uniform colour and consistency are achieved.

Application

KingFloor EPWB 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:

- *KingFloor EPWB 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.*
- *KingFloor EPWB 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 30ºC).*

PACKAGING

KingFloor EPWB is available in 6 kg packs (4 litres) and 18 kg packs (12 litres).

COVERAGE

0.75 kg/m² per 500 microns DFT per 2 coats. Higher thicknesses can be achieved with either multiple application or by using airless spray machines.

Chemical Resistance after full cure, ASTM D1308 (Spot - test @ 1 hr)		
CHEMICALS	**KingFloor EPW-P**	**KingFloor EPW-S**
Hydrochloric Acid 36%	RS	RS
Nitric Acid 25%	RS	R
Sulphuric Acid 50%	RS	RS
Citric Acid 10%	R	RS
Sodium Hydroxide 50%	R	R
Diesel	R	R
Engine oil	R	R
Bleach	R	R
Acetic Acid 5%	R	SS
Lactic Acid 10%	R	RS
Sulphuric Acid 25%	RS	RS
Chemical Resistance, ASTM D1308 after 7 days immersion in the below chemicals		
CHEMICALS	**KingFloor EPW-P**	**KingFloor EPW-S**
Hydrochloric Acid 36%	SS	SS
Sulphuric Acid 50%	SS	SS
Citric Acid 10%	R	RS + SS
Sodium Hydroxide 50%	R	R
Diesel	R	R
Engine oil	R	R
Gasoline	R	R
Kerosene	R	R
Jet fuel	R	R
White spirit	R	R
Sulphuric Acid 25%	SS	SS
Acetic Acid 25%	SS	SS

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

Occassional Spillage.

KingFloor ® EPWB

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

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.

Performance characteristics	EN 1504-2 requirement	Measured value
Capillary absorption: EN 1063-3	< 0.1 kg/m^2.h$^{0.5}$	Pass
Adhesion strength: EN 1542	≥ 1.5 MPa	≥ 2.0 MPa (flexible system with trafficking)
Abrasion resistance: EN ISO 5470-1	< 3000 mg H22, 1 kg, 1000 cycle	Pass < 1000 mg
Impact resistance: EN ISO 6272-1	Class I: ≥ 4 Nm Class II: ≥ 10 Nm Class III: ≥ 20 Nm	Class I
Crack bridging: EN 1062-7	A1: > 0.10 mm A2: > 0.25 mm A3: > 0.50 mm A4: > 1.25 mm A5: > 2.50 mm	Class A3
Artificial weathering: EN 1062-11:2002	After 2000 hr No blistering, cracking, or flaking	Pass

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