

Strongcoat EPW

High build flexible chemical resistant epoxy polysulphide coating



Description

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

Strongcoat EPW has outstanding chemical and mechanical properties to protect concrete and steel from aggressive environment or wide range of chemicals.

Applications

Strongcoat EPW is designed for variety of applications such as:

- ▲ Heavy duty protective and waterproof coating for concrete and steel.
- ▲ Strongcoat EPW-P is suitable for use with potable water retaining structures and reservoirs.
- ▲ Strongcoat EPW-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 Strongcoat EPW-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

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

Technical Properties:

Colour:	<i>Strongcoat EPW-P</i> : Light grey <i>Strongcoat EPW-S</i> : Black
Volume solids:	100%
Mixed density:	1.5 ± 0.05 g/cm ³ @ 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	10 mg
500	20 mg
1000	40 mg
Water absorption: ASTM D570	< 0.3%
VOC:	< 30 g/ltr



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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 Quickmast 341.

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 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

Strongcoat EPW 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:

- ▲ Strongcoat EPW 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.
- ▲ Strongcoat EPW 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 DCP Solvent. Hardened materials must be cleaned mechanically.

Performance characteristics	EN 1504-2 requirement	Measured value
Capillary absorption: EN 1062-3	< 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

Occasional Spillage.

Chemical Resistance after full cure, ASTM D1308 (Spot - test @ 1 hr)

Chemical	Strongcoat EPW-P	Strongcoat 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

R: Resistant

RS: Resistant with slight discoloration

SS: Slight softening

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Packaging

Strongcoat EPW 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.

Storage

Store in a dry area out of direct sunlight at temperatures between 5°C and 35°C.

Shelf Life

Strongcoat EPW has a shelf life of 12 months if stored in dry conditions at room temperature in original unopened Packs.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

Cautions

Health and Safety

Strongcoat EPW should not come in contact with skin or eyes. Goggles and gloves should be used.

In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

For further information refer to the Safety Data sheet.

Fire

Strongcoat EPW is not flammable.

Chemical Resistance, ASTM D1308 after 7 days immersion in the below chemicals

Chemical	Strongcoat EPW-P	Strongcoat 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

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- ▲ Concrete admixtures.
- ▲ Surface treatments
- ▲ Grouts and anchors.
- ▲ Concrete repair.
- ▲ Flooring systems.
- ▲ Protective coatings.
- ▲ Sealants.
- ▲ Waterproofing.
- ▲ Adhesives.
- ▲ Tile adhesives and grouts.
- ▲ Building products.
- ▲ Structural strengthening.



Note:

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