Strongcoat PE4

Two component solvent free coal tar epoxy resin coating system

Description

Strongcoat PE4 is a two component, solvent free, amine cured coal tar epoxy. The product has excellent water and chemical resistance properties which makes it particularly suitable for aggressive environments such as sewage treatment plants and sewage manholes. Strongcoat PE4 is suitable for use on concrete and steel surfaces.

Applications

Strongcoat PE4 provides chemical and abrasion resistance to prevent corrosion of concrete and steel substrates. Typical applications include:

- Seawater tanks, channels and intakes.
- Manhole linings.
- Sewage and effluent plants.
- Chemical processing areas.
- Building foundations waterproofing.
- Jetties, piers and docks.

**Not suitable for surfaces in contact with drinking water.*

Advantages

- Excellent adhesion to concrete and steel surfaces.
- Cost effective; does not require a primer.
- Suitable for use as waterproof coating.
- High chemical resistance.
- Does not support bacterial growth.
- High abrasion resistance.
- Can be applied to green concrete.

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.

Technical Properties:	
Colour:	Black
Mixed density:	1.3 ± 0.05 g/cm^3
Pot life:	50 - 70 min @ 25°C 25 - 35 min @ 40°C
Tack free time:	3 - 4 hr @ 25°C 1 - 2 hr @ 40°C
Over-coating time:	6 - 12 hr @ 25°C 4 - 8 hr @ 40°C
Curing time @ 25°C:	1 day for foot traffic 7 days for full chemical cure
Water absorption: ASTM D570	< 0.01%
Water permeability: DIN 1048 2 bars @ 100 days	Nil
Salt spray test: BS 1881/124:1988 Over 1000 hr	Nil @ 250 microns thickness
Bond strength: BS 1881, Part 207	> 2 MPa
Impact resistance BS 3900, Part E3	Passed
Service temperature:	-20 to 75°C
Water absorption: ASTM D570	< 0.1%
VOC :	< 50 g/ltr

Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

Stir the content of each component separately to disperse any settlement. Mix both hardener and base together for 3 minutes in a separate container and until uniform colour and consistency is achieved.

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Application

Strongcoat PE4 can be applied by brush and roller. 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:
For hot climate application, the following guidelines must be adopted as a prudent working regime:

- The unmixed materials should be stored in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- The mixing and placing equipment should be kept cool; shade protection should be arranged if necessary. It is especially important to keep cool, the equipment surfaces which will come into direct contact with the material itself.
- Application in the middle of the day should be avoided and must not be carried out under direct sunlight.
- For hand application, it should be ensured that sufficient operatives are available to complete the application within the pot life of the material.
- If application is carried out in cold weather (below 15°C), the materials should be stored in a heated building and only removed immediately before use.
- Accelerated heating methods must not to be used under any circumstances.

Cleaning

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

Packaging

Strongcoat PE4 is available in 5 kg packs (3.8 litre).

Coverage

5 kg pack will cover 15 - 16 m² per coat to give dry film thickness of 250 microns.

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.

Storage

Strongcoat PE4 has a shelf life of 12 months from date of manufacture if stored at temperatures between 5°C and 35°C.

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

Cautions

Health and Safety

Strongcoat PE4 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 advise if necessary.

During application in closed space, sufficient ventilation must be provided. In badly lit rooms only electric safety lamps are permitted.

Unused Strongcoat PE4 can contaminate water. Disposal according to local regulations must be followed.

Spillages

Spillages should be absorbed by sand then to be transferred to suitable containers.

Disposal of these spillages and the empty packages must be done according to local regulations.

For further information refer to the Material Safety Data Sheet.

Fire

Strongcoat PE4 is nonflammable.

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