

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 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 surfaces. 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.
- » UV resistant.

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:	1.50 ± 0.05 g/cm ³ @ 25°C
Mixing ratio:	1:1 by weight
Pot life:	50 – 80 min @ 25°C 30 – 60 min @ 35°C
Tack free time:	3 - 4 hr @ 25°C 2 - 3 hr @ 35°C
Over-coating time:	8 – 10 hr @ 25°C 6 – 8 hr @ 35°C
Full cure:	7 days @ 25°C 4 days @ 35°C
Water permeability: DIN 1048 2 bars	Nil
Salt spray test: BS 1881/124 : 1988 Over 1000 hr	Nil @ 200 microns thickness
Bond strength: BS 1881, Part 207	> 2 MPa (concrete Failure)
Water absorption: ASTM D570	< 0.1%
Taber abrasion resistance: ASTM D4060 (1000 g/1000 cycles) CS17	< 170 milligram
VOC :	≤ 75 g/ltr (Comply with LEED)

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 15oC), 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 14 kg packs (9 litre).

COVERAGE

Approximately 0.30 kg/m² per coat to achieve a dry film thickness (DFT) of 200 microns per coat.
Two coats recommended.

CHEMICAL RESISTANCE AFTER FULL CURE ASTM D1308 (AFTER 7 DAYS IMMERSION IN THE BELOW CHEMICALS)

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

Oils & Fuels

Benzyl Alcohol	R
Brake Fluid	R
Engine Oil	R
Diesel	R
Kerosene	R
Detergents & Soaps	R

Inorganic Acids

Sulphuric Acid 25%	R
Nitric Acid 10%	R
Lactic Acid 10%	SS
HCL 10%	SS
Phosphoric Acid 20%	R
Vinegar 5%	SS

R: Resistant

RS: Resistant with slight discoloration

SS: Slight softening

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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.

CHEMICAL RESISTANCE AFTER FULL CURE (7 DAYS @ 25°C) ASTM D1308 (SPOT-TEST @ 1 HOUR)

Inorganic Bases

Sodium Hydroxide 50%	R
Potassium Hydroxide 50%	R

Aqueous Solutions

Sodium Chloride sat	R
Tap Water	R
Chlorinated Water	R

Oils & Fuels

Benzyl Alcohol	RS
Engine Oil	R
Diesel	R
Detergents & Soaps	R

Inorganic Acids

Sulphuric Acid 25%	R
Nitric Acid 10%	R
Lactic Acid 10%	RS
HCL 10%	RS
Phosphoric Acid 20%	RS
Vinegar 5%	RS

R: Resistant

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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:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.