

Polycrete ST



TO SEAL & PROTECT

Technical Data Sheet

DESCRIPTION

Polycrete ST is a fibre reinforced, polymer modified, shrinkage compensated structural grade thixotropic repair mortar system

USES

- ▶ Structural repairs to concrete by hand or trowel application.
- ▶ Repairs to structural reinforced, pre-stressed floors, beams, walls and columns.
- ▶ Repair of concrete in highly corrosive industrial, marine structures, sea walls port installations etc.

FEATURES

- ▶ High strength.
- ▶ High build capability.
- ▶ Fibre reinforced.
- ▶ Shrinkage compensated.
- ▶ Prevents the corrosion of steel reinforcement in concrete.
- ▶ Can be applied by gloved hand, trowel or sprayed.

TECHNICAL PROPERTIES

| | |
|--|--------------------------|
| Appearance | : Grey Powder |
| Water Powder ratio | : 0.14 |
| Fresh Wet Density | : 2.1g/cc |
| Corrosion | : Chloride free |
| Setting time | : 20°C 30°C |
| Start setting | 3.5 hours 2 hours |
| End of setting | 4.5 hours 2.5 hours |
| Compressive strength at 28 days ASTM C 579 | : > 55 N/mm ² |
| Flexural strength at 28 days ASTM C 580 | : > 8 N/mm ² |
| Bond Strength | : > 2 N/mm ² |

APPLICATION PROCEDURE

Surface preparation

The surface of the concrete to be repaired should be sound, clean and uncontaminated. The decayed or damaged area should be saw cut to a minimum depth of 8mm, keeping the sides of the area as square as possible. Loose materials must be removed carefully using suitable means such as chisels or chipping hammer. If the reinforcement is corroded make sure that the back of

the steel is completely exposed. Clean the steel to bright metal condition by grit blasting or vigorous wire brushing. If the rebar has lost more than 25% of its original diameter, consult design engineer for advice on cutting out and replacing corroded rebar.

Priming

a. Reinforcement steel: After cleaning or lapping new steel, prime using Polyzinc Zinc rich primer. Brush apply a continuous coat of Polyzinc to the dry steel. A second coat may be applied after 5 hours. b. Concrete: Pre-wet the contact surfaces and remove any standing water, apply a coat of PolybondAC @ 5-6 m²/lt. and allow to become tacky before applying the Polycrete ST mortar. If the repair area will be subjected to permanently damp or wet conditions or there are known residues of chlorides in the surrounding concrete, prime the contact surfaces with Polycrete ST epoxy primer for enhanced adhesion and to create a substrate barrier.

Mixing

Polycrete ST must be mixed using a high torque low speed (300-400 rpm) drill and heavy duty mixing paddle. Add the powder to 3.5 to 4 lt. of clean cool water (below 25°C). Mix until a homogenous lump free mix is obtained.

Placing and finishing

Whilst the primer is still tacky, apply the mixed Polycrete ST by gloved hand or trowel to desired thickness in layers on vertical and overhead surfaces. High build application can be achieved by using formwork. While applying multiple layers, the previous layer should be cross hatched and allowed to set before applying the next coat. Polycrete ST can be applied to a thickness of 35 mm vertically or 15mm in overhead repairs. If building up layers of repair mortar, cross hatch the surface of each layer before applying the next.

Curing

We recommend that Polybond AC is applied to the finished surface of the repair. In hot dry conditions also cover the repair with a sheet of polythene to avoid drying out and reduce the risk of surface cracking which could occur in such conditions.
Do Not Use Wet Curing.

CLEANING

Clean all the tools with water immediately after use. Hardened materials can be removed mechanically only.

COVERAGE/YIELD

Polycrete ST : 12.75 lt./25 kg with 3.75 lt. of water.

Polybond AC : 5-6 m²/lt.

Polyzinc : 7 m²/lt.

Polybond EP : 3-5 m² /lt.

PACKING

Polycrete ST : 25 kg bag.

Polybond AC : 20 lt. pail

Polyzinc : 1 lt. tin.

Polybond EP : 1 lt. & 5 lt. kit.

STORAGE

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climates, the product must be stored in air - conditioned environment.

SHELF LIFE

Shelf life is up to 12 months when stored as per recommendations. Storage in uncovered, humid conditions will substantially reduce shelf life.

HEALTH AND SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.