

StrongPatch HPX

High Early and Final Strength Polymer Modified Patch Repair Mortar

Description

StrongPatch HPX is a prepacked, ready to use, high strength, shrinkage compensated cementitious polymer modified powder mix, which in addition of measured water in the mix produces patch high build repair mortar. It consists of specially blended OPC, shrinkage compensated cement additive, graded sands, fillers and chemical polymers to provide durable repair to structural concrete. The mortar mix allows for application thickness up to 40 mm for vertical and 25 mm overhead without formwork.

Uses

StrongPatch HPX is used especially for use as a special patch concrete repair mortar requires high strength, such as for column, concrete walls, beams, highway and heavy duty warehouse slabs.

Application areas

- Bridges, precast, fly overs
- Tunnels & box culverts
- Piers, beams
- Building column, beams
- Highways, harbor slabs

Advantages

StrongPatch HPX has the following advantages

- Prepacked, ready to use, only addition of water
- High strength and high early strength
- Medium to high build application
- Shrinkage compensated, prevents cracking for large areas and thick applications.
- Polymer modified ensures good adhesion
- Contains special additives ensure an optimum density for water tightness and water repellence of cured surfaces

Physical Properties

Test Method	Typical Result
Compressive Strength ASTM C94	35 N/mm ² @ 1 day 52 N/mm ² @ 7 days 60 N/mm ² @ 28 days
Flexural Strength ASTM C94	9.0 N/mm ² @ 28 days
Drying Shrinkage	300 – 600 µstrain
Setting time (25 C)*	4 – 5 hours (Initial) 6 – 7 hours (Final)
Fresh Wet Density Bulk Density	2,100 +/- 50 kg/m ³ 1.800 +/- 20 kg/m ³

Application

Substrate Preparation

Ensure that the substrates to be repaired must be clean and free from surface contaminants such as dust, dirt, fungus growth, rust, sludge, and other loose particles. Clean the substrate by using wire brush, scrub and clean water jet throughout the surface.

In the case of repairing of damaged structure, expose fully corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with the clean water immediately after grit-blasting to remove corrosion products form pits and imperfections within its surface.

Priming

All surfaces must be primed prior repair. Reinforcing steel must be primed with galvanized protective coating or epoxy system which will prevent further corrosion.

All concrete surfaces should be thoroughly soaked but leaving no surface water

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Concrete surface must be primed with **StrongPrime** or **StrongBond** bonding agent which is scrubbed onto the surface of the concrete. It will dry in approximately one hour. **StrongBond** should be applied when the it is still tacky.

If the **StrongBond** is too wet, build up may be reduced due to slippage in vertical situation. For heavy duty area, use of StrongPrime (epoxy prime) is highly recommended.

Mixing

Ensure that **StrongPatch HPX** is thoroughly mixed prior to use. It is essential that quantities of one bag or more are mixed in a forced action pan mixer or with a slow speed drill (500rpm) fitted with a spiral paddle. For normal applications 4.00 – 4.50 litres of water should be added to 25 kg bag. Add the measured water to mixing bowl before adding powder slowly and mix thoroughly until homogenous mixed is achieved.

Placing

Place the mixed mortar by using a wooden, plastic trowel. Please ensure to start trowelling only after the mortar has set sufficiently hard to resist fingers penetration.

Cleaning

StrongPatch HPX should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Storage

StrongPatch HPX should be stored on pallets in dry conditions. Under these conditions, the product will have a shelf life of 12 months.

Packing & Size

StrongPatch HPX is packed in 25 kg bags. **StrongBond AR/SBR/VA** is packed in 20 kg pail.

Yield

13.5 – 14.0 Liter mixed mortar for 25 kg bag

Precaution

StrongPatch HPX should not be in contact with skin and eyes. Avoid inhalation of dust during mixing. Wear gloves, goggles and dust mask.

Technical Support

Estrong offers a comprehensive range of high performance, high quality of repair product for both new and existing concrete surfaces. In addition, the company offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.

Additional Information

Estrong manufactures and offers a wide range of complementary products, which includes water stops, waterproofing products, grouts and repair.