

EPOCRETE PC

Flowable Pile Head Re-Profiling Epoxy Grout

Description:

EPOCRETE PC is a three-component epoxy based high strength impermeable grout, formulated to meet the requirements of pile head treatment as a re-profile grout and waterproof encapsulation of the pile head. Once applied on top of the pile, it creates a high bonded waterproof barrier which prevents the underground water to leak from ground to pile caps through the pile head.

EPOCRETE PC is composed of a resin base (part A), hardener (part B) and graded filler (part C). When mixed, the resulted product becomes flowable grout that cures to a high strength impermeable epoxy grout.

Uses:

EPOCRETE PC is designed to be used as:

- Pile head waterproofing treatment system.
- To prevent the chance of underground water to leak to the basement by capillary forces along the reinforcement bars.
- High compressive strength re-profiling grout for pile heads.
- Anchoring bolts in rails, crane and bridge bearing seats.
- Underplate grouting and heavy machine beds.

Advantages:

- High compressive strength.
- Self-compacting, free flowing-grout, easy to apply
- No water penetration which ensures a full waterproofing barrier to the pile head.
- Excellent bond to pile head.
- Suitable for repetitive dynamic and cyclic loads.
- Good flowability with high effective bearing area.
- Excellent creep resistance and mechanical properties.
- High resistance to soil chemical attacks.
- Compatible to most types of waterproofing systems.

Instructions for Use:

Surface Preparation:

The boundary of the pile should be cut at the required level using a concrete saw to provide a neat cut with no feather edging. The area of the pile head to be repaired may then be broken out up to the prepared level. All reinforcement bars should be straighten, clean from rust. Bars which show signs of corrosion should be grit blasted to bright metal. Immediately after the cleaning of steel bars is completed, coat the bars with LAVAFER-a two component cementitious corrosion inhibiting primer or LAVAZINC EP – a two component epoxy zinc primer, as a protection layer to prevent further corrosion. The substrate should then be clean, free from dust, inconsistent parts, traces from stripping oils, efflorescence, rust, etc.

Construct a leak proof formwork for the pile as EPOCRETE PC is a free-flowing grout. Coat the formwork from inside with release agent to ease the de-bonding of the shutter afterward. Extra care should be taken when applying the release agent not to coat the top of pile head.

Mixing:

EPOCRETE PC is a three-part system. It is recommended to stir the base resin and the hardener separately for two minutes to ensure that they are blended well. Add the contents of container B (hardener) to the contents of container A (base) and mix mechanically with low-speed drill mixer fitted with a suitable paddle for 3 minutes. While mixing, add the contents of part C (filler) and mix for 3-5 minutes more until a homogenous lump free mixture is obtained. Allow the mix to rest for few minutes to allow releasing the entrapped air. Partial mixing of the three components should not be allowed under any circumstances.

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Application:

Place the mixed EPOCRETE PC directly to the pile head. Allow the grout to self-level while watching the formwork integrity for any possible leakage. Level the poured grout with a steel trowel with the upper edge of the formwork. Always prepare a controlled mix quantity suitable to grout a full pile head or equal multiples. It is not recommended to mix partial quantities. This will result in disintegration in the waterproofing characteristics of the epoxy grout layer.

Remove the formwork after grout cures and check for disintegration in the perimeter of the epoxy grout. Apply touch up with LAVAPOXY FINISH-two parts epoxy repair fairing coat to allow a smooth integrated tight epoxy layer. This layer can be considered as a waterproofing integral part.

Standards:

- EN 1504-6
- ASTM C579, C580, 307, C1181, C531, D695, C882, C1339

TECHNICAL PROPERTIES	
Appearance	Grey Paste
Density	2.00 ± 0.03 kg/lit
Potlife time @25°C	45 minutes
Compressive Strength @7 days (ASTM C579)	>80.0 N/mm ²
Flexural Strength @7 days (ASTM C580)	>21.0 N/mm ²
Tensile Strength @7 days (ASTM C307)	18.0 N/mm ²
Water Permeability (BSEN 12390)	NIL
Chloride Content (ASTM 1202)	NIL
Sulphate Resistance	Excellent
Bond Strength (ASTM C882)	Higher than the cohesive strength of concrete
Minimum Grout Depth	10 mm
Maximum Grout Depth	100 mm

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Yield:

EPOCRETE PC achieves 15.0 liters of wet mixed grout per 30 Kg. Kit

Packaging:

EPOCRETE PC available in 30 kg kit of three components (two metallic containers and a bag of filler).

Storage:

Store in original packing in dry conditions away from direct sunlight and in a temperature-controlled warehouse @25°C.

Shelf Life:

EPOCRETE PC can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

Cleaning:

Clean tools and equipment with ARMOSOLVENT before material hardens. Hardened material can only be removed mechanically.

Remarks:

- Do not apply where ambient temperatures are below 5°C.
- Partial mixing of the product components should not be allowed under any conditions.
- EPOCRETE PC can be used for thick section applications.
- Extra care should be taken when applying at high temperature as pot life of the mixed product will shorten dramatically.
- It is recommended to shade the working area while mixing and placing EPOCRETE PC. Tools should be kept in shade prior to use.

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Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapor or spray mist.

FIRST AID:

Eyes:	In the event of accidental splashes, flush with warm water and seek medical advice.
Skin:	Wash skin thoroughly with soap and water
Inhalation:	Remove to fresh air, keep patient rested
Ingestion:	Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer EPOCRETE PC Material Safety Data Sheet.

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