

EPOCRETE

High Strength Flowable Epoxy Grout

Description:

EPOCRETE is a superior performance, solvent free epoxy resin grout formulated for grouting of gaps with widths from 10 to 50 mm and as a high strength pilehead reprofiling grout. It consists of three components kit, resin base (A), hardener (B) and graded filler (C). When mixed together, the product forms a free flow self-levelling grout.

EPOCRETE mainly used to provide a free-flowing grout, with high mechanical properties, for use where physical properties, mechanical strength, superior creep resistance, high effective bearing area and chemical resistance of the hardened grout are of utmost importance.

Uses:

EPOCRETE is suitable for a wide range of heavy-duty applications including:

- Under plate grouting of structural elements and heavy machinery, equipment.
- High strength waterproofing and reprofiling grout for pileheads.
- Equipment bases where chemical and acid spillage occurs.
- Base plate grouting in dynamic and vibratory load situations such as crane rail and wind turbine.
- Heavy industrial applications in steelworks, refineries chemical plants and electroplating works.
- Structural infill repair where very high strength is required.
- Rail track applications, to support heavy cranes.
- Installation of anchors, dowels, starter bars, fasteners.

Advantages:

- Excellent performance. Suitable for a wide range of loading situations including repetitive dynamic loads.

- Non-shrinking with high adhesion to contact surfaces.
- High compressive, tensile and flexural strengths.
- High chemical resistance.
- High early strength gain.
- Low coefficient of thermal expansion
- Excellent creep resistance
- High effective bearing area for even load distribution
- Excellent adhesion to substrate.
- High resistance to dynamic loads, thermal effects and chemical attacks.
- User friendly - simple, full pack mixing to ensure that the performance characteristics are achieved.

Instructions for Use:

Surface Preparation:

All surfaces must be dry, clean, free from oil, grease, water, paints, dust. Unsound concrete must be removed. Concrete should be sufficiently cured.

Steel surfaces should be free of rust or any contaminated product. Sand blasting or grinding the steel and protect with ARMOPRIME EP70 – solvent base epoxy primer, to avoid a chance of rusting to start again.

The formwork should be constructed to be leak proof as EPOCRETE is a free flow grout. If needed, use foam rubber strip or mastic sealant beneath the constructed formwork and between joints.

For free flow grout conditions, it is essential to provide a hydrostatic head of grout. To achieve this, a feeding hopper should be used.

Concrete surface must be totally dry when the mixed product is poured as wet surface might cause de-bonding between concrete and the grout.

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Mixing:

It is recommended to stir the base resin and the hardener separately for two minutes to ensure that they are blended well. The entire contents of the hardener (part B) should be poured into the base container (part A) and mixed for 2-3 minutes or until a homogeneous mix is achieved. While mixing add slowly component C (filler) and mix for 2 – 3 minutes more until getting a unified color mixture. Do not mix partially under any conditions and do not mix the components manually, in order to ensure proper and complete chemical reaction mix of the whole kit. Use a slow speed drill fitted with a suitable paddle for mixing.

Application:

The mixed grout should be poured only from one side of the formwork to eliminate the entrapment of air. This can be achieved by pouring the grout across the shortest distance. While pouring, maintain a constant, preferably of at least 15 cm on the side where the grout has been poured. Allow 10 cm clearance between the side of the form and the base plate of the machine

The mixed material must be used within the specified pot life. After this time, the unused material will start to stiffen and should be discarded.

Standards:

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

Yield:

EPOCRETE achieve 15.0 liter of wet mixed grout per 30 kg kit

Packaging:

The product supplied in 3 kits containing base, hardener, and filler in 30 Kg. kit.

Storage:

Keep the product in dry, covered conditions at 25°C.

TECHNICAL PROPERTIES

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Color	Grey
Density	2.0 ± 0.03 kg/cm ³
Potlife time @25°C	30 minutes
Compressive Strength@7 days (ASTM C579)	120 N/mm ²
Flexural Strength @ 7 days (ASTM C580)	35 N/mm ²
Tensile Strength (ASTM C307)	25 N/mm ² @7 days
Bond Strength (ASTM C882)	>3.0 N/mm ²
Chemical Resistance	Excellent
Effective Bearing Area	>90%
Compressive Modulus (ASTM D695)	15 GPA
Thermal Expansion Coefficient (ASTM C531)	2.6 x 10 ⁻⁵ mm/mm/°C
Creep Resistance, 400 psi, 60°C (ASTM C1181)	2.76 mm/mm
Abrasion Resistance	Higher than concrete
Impact Resistance	Higher than concrete
Water Penetration	NIL
Minimum Grout Depth	10 mm
Maximum Grout Depth	50 mm

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

Shelf Life:

EPOCRETE can be utilized within 12 months from date of manufacturing if stored in an unopened packaging as recommended.

Cleaning:

All tools and equipment should be cleaned immediately after use with ARMOSOLVENT. 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.

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- EPOCRETE 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. Tools should be kept in shade, prior to use.

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 vapour 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 Material Safety Data Sheet.

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