Technical Datasheet

EpiFlow R80

Three-component, non-shrink, high-strength, pourable epoxy grout / mortar

Description

EpiFlow R80 is a 3-component, pourable, high-strength, non-shrink grout, based on a two-component solvent-free epoxy resin (Parts A & B) and a special selected quartz sand (Part C). It provides:

- High initial and final strength
- Excellent bond strength to steel and concrete
- Resistance to impact and vibration
- Chemical resistance
- Waterproofing

Certified according to EN 1504-3 and EN 1504-6 as a mortar for concrete repairs and as an anchoring product for reinforcing steel bars respectively. CE marked.

Fields of Application

EpiFlow R80 is used in a wide range of grouting applications where high strength is required, such as:

- Anchor bolts
- Machine bedding
- Bridge bearings
- Stanchions

It can also be used as either pourable or thixotropic mortar for repairs in damaged concrete elements. etc.

Technical data

Part A & B:	2 component epoxy resin
Part C:	Aggregate Filler
Density (A+B+C):	1.95 ± 0.05 g/cm^3
Pot life at 25ºC,	30 – 40 mins
Service temperature:	-30 up to 80ºC
Compressive Strength after 7days: *EN 12190*	92 MPa
Flexural Strength: *EN 12190*	30 MPa
Adhesion strength: *EN 1542*	4.2 MPa (minimum) or concrete failure
Adhesion after 50 freeze thaw cycles: *EN 13687-2*	4.2 MPa (minimum) or concrete failure
Chloride content: *EN 1015-17*	0.00%
Capillary water absorption: *EN 13057*	0.05 kg·m^{-2}·h$^{-0,5}$
Abrasion resistance: *BCA method EN 13892-4*	AR 0.5
Pull out strength: EN 1881:	Displacement ≤ 0.6 mm at load of 75 kN
Glass transition Temperature: *EN 12614*	65°C

Directions to use

Substrate preparation

- The surface should be:
- Dry and stable.
- Free of materials that prevent adhesion, e.g. dust, loose particles, grease, formwork oils, existing surface treatment with concrete curing agents, old coatings, etc.

Depending on the nature of the substrate, it should be prepared by brushing, grinding, sandblasting, water blasting, shot blasting, etc. Following this, the surface should be cleaned from dust by air blasting.metal.

EpiFlow R80

Formwork

The formwork used for casting the grout must be leakproof and arranged to allow gravity flow to fill completely the void to be grouted. Formwork should be coated with formwork release agent such as SPLIT-2000, to allow easy removal of forms.

Mixing of the components

Components A (resin) B (hardener) and C (sand) are packaged in separate containers, having the correct predetermined mixing ratio by weight.

First, stir component A vigorously. Then, add the entire contents of component B to component A. Mixing of the 2 components should take place for about 1-2 minutes, using a low-speed mixer (300 rpm). It is important to stir thoroughly the mixture near the sides and bottom of the container, to achieve uniform dispersion of the hardener.

Place the mixed A and B components into a larger clean mixing bucket and continue mixing while adding component C slowly to keep air entrapment at a minimum. The mixing is being done by using a low-speed mixer (300 rpm) until an even distribution of the aggregates throughout the mix has been achieved (approx. for 3-5 minutes).

Application – Consumption

Mixed EpiFlow R80 should be poured into the formwork from one side continuously, to avoid air entrapment. For bolt anchoring fill first at least half the volume of the performed holes before placing the bolt in the grout.

Maximum layer thickness is 5 cm. If necessary, apply a successive layer within 24 hours from the application of the first layer.

Remarks

- The workability of epoxy materials is affected by their temperature. The ideal temperature of application is between +15°C and +25°C so that the product will be easy to use and cure as prescribed. Room temperature below +15°C will extend the curing time while temperature above +30°C will accelerate it. It is recommended to mildly preheat the product during winter, and store the product in a cool room before application during summer.
- Bonding between successive layers may be severely affected by moisture or dirt.
- Epoxy layers should be protected from moisture for 4-6 hours after application. Moisture may whiten the surface or/and make it sticky. It may also disturb hardening. Faded or sticky layers in parts of the surface should be removed by grinding or milling and laid again.
- In case recoat time is longer than expected or in case old floors are to be overlaid again, the surface should be thoroughly cleaned and ground before application of the new layer.
- After hardening, **EpiFlow R80** is totally safe for health.

Packaging

EpiFlow R80 is supplied in container (A+B+C) of 10 kg and 25kg Kit.

Shelf life - Storage

12 months from production date if stored in original, unopened packaging, at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

Health & safety

Avoid direct contact with this product. Use of safety glasses, rubber gloves, and protective clothing is recommended. If contact occurs, wash affected areas with mild soap and water. Keep product out of reach of children.

Refer to Safety Data Sheet for complete health and safety information.

Notes

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