Denepox 40

An ultra low viscosity, 2-component epoxy injection resin for structural injections in concrete. Denepox 40 can be used in a dry or wet environment.

• field of application

- Low pressure injection for the structural bonding of cracks and micro-cracks in dry or wet concrete.
- Bonding and anchoring.
- Sealing of porous low density concrete.
- Denepox 40 is not suited for applications in contact with moving water.

• advantages

- Insensitive to humidity.
- Cures in damp/wet environment.
- Low viscosity: deep penetration in the cracks.
- Very good adhesion: exceeds the cohesion of the concrete.
- Solvent free.
- Long pot life.
- Cured Denepox 40 is resistant to acids, alkalis, oils, greases and petroleum derivatives(*).

• description

Pre-weighted 2-component epoxy resin, which cures into a rigid compound.

• application

1. Surface preparation

Surfaces to be repaired or sealed need to be clean and sound. The concrete surface must be free of dust, laitance, sealers, grease or any other contaminants that might influence bonding of the resin to the concrete.

2. Injection ports

Entry ports for injecting should be approved devices spaced at appropriate intervals to accomplish full penetration of the resin into the cracks or voids.

Drilled ports

- Drilling of cracks for packers needs to be executed in accordance with local regulations. After drilling the hole, insert packer.

Glued ports (plastic or metal)

- The injection ports should be fixed to the surface of the crack with Multitek Adhesive SD (dry surface) or Multitek Adhesive SDW (damp surfaces).
- Apply a layer of Multitek Adhesive SD, Multitek Adhesive SDW (damp surfaces), polyester paste or fast curing cement to the surface of the crack.

3. Mixing

- Mix the pre-weighted quantities of resin (A-component) and hardener (B-component) with a low speed mixer (300 rpm) until a homogeneous liquid is obtained. Never mix more material than the quantity that can be used up within 60 minutes.
- Mixing ratio A/B = 100/30 (mass).
  91/32 (volume).

4. Injection

- The crack can be injected with a manual (single piston) pump or a mechanical (single or double piston) injection pump.
- Initial hardening time: approx. 24h. at 20°C.
- Uncured material and equipment should be cleaned with solvent MEK.

• technical data/properties

Property	Value	Norm
Bonding strength on dry concrete	Exceeds coherence of concrete	ISO 4624
Bonding strength on damp concrete	Exceeds coherence of concrete	ISO 4624
Compressive strength	Approx. 100N/mm^2	NBN EM 196
Tensile strength	> 50 N/mm^2	
Bending strength	> 60 N/mm^2	NBN EM 196
Elongation at break	< 10%	
Glass transition temperature	> 60°C	EN 12614
Density	1-1,1 kg/dm^3	
Viscosity (mixture) at 25 °C	Approx. 85	Test DNC
Pot life	Approx. 80 minutes (100 g at 25°C)	Test DNC
Minimum application temperature	Approx. 10°C	

Full chemical or mechanical resistances are only reached after a curing period of 7 days at 20°C. Mechanical properties of epoxy resins decrease at temperatures higher than 50°C

• appearance

Pre-weighted

A-component : epoxy resin, transparant.
B-component : polyamine hardener, light yellow.
Colour : transparent.

• consumption

Has to be estimated by the engineer or operator and depends on width and depth of the cracks and voids.

• packaging

Denepox 40 (3 kg set)

A-component: metal pail

net : 2,3 kg (gross: 2,47 kg).

B-component: metal pail

net : 0,7 kg (gross: 0,78 kg).

1 box

5 pails of A-component and 10 pails of B-component.

1 pallet

16 boxes of A-component and 8 boxes of B-component.

• storage

Denepox 40 is sensitive to moisture and should be stored in original containers in a dry area. Storage temperature must be between 5°C and 50°C. Once the packaging has been opened, the useful life of the material is greatly reduced and it should be used as soon as possible.

Shelf life: 2 years.

• accessories

To be ordered separately

- IP 1C-Manual hand pump.
- IP 1C-Compact electrical airless diaphragm pump.
- Packers and connectors.
  (Please consult the relevant data sheet).

• health & safety

Denepox 40 A-component is classified as irritating.
Denepox 40 B-component is classified as corrosive.
Always wear protective clothing, gloves and protective goggles.
For full information, consult the relevant Material Safety Data Sheet.
(*) For chemical resistance please contact your De Neef representative.

• certification

CE

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EN 1504-5
Concrete Injection
Force transmitted filling of cracks
U (F1) W(3) (1/2) (10/40) (0)

Adhesion by tensile bond strength	≥ 2 N/mm^2
Adhesion by slant shear strength	Monolithic failure
Shrinkage	< 3%
Glass transition temperature	> 40°C
Workability	Crack width from 0,3 mm
Moisture state of the crack	dry, damp and wet
Durability	Pass
Corrosion behaviour	Deemed to have no corrosive effect
Dangerous substances	Complies with 5.4

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