

DE NEEF[®] Denepox 40

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

Product Description

Two-component epoxy resin, which cures into a rigid compound in wet and dry conditions.

Field of Application

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

Product 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 DE NEEF[®] Denepox 40 is resistant to acids, alkalis, oils, greases and petroleum derivatives (*)

(*) For chemical resistance please contact your local GCP representative.

Appearance

A-component Epoxy resin, transparent

B-component Polyamine hardener, light yellow

Colour Transparent

Mixing ratio by weight: 100:30

Consumption

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

Technical Data / Properties

Property	Unit	Value	Standard
Bond strength to dry concrete	MPa	Exceeds concrete cohesion	EN 1542
Bond strength to damp concrete	MPa	Exceeds concrete cohesion	EN 1542
Compressive strength	MPa	Approx. 100	NBN EN 196
Tensile strength	MPa	'> 50	ISO 527
Flexural strength	MPa	'> 60	NBN EN 196
Glass transition temperature	°C	< 60	EN 12614
Density at 25 °C	Kg/dm ³	Approx. 1.1	EN ISO 2811
Viscosity at 25 °C	mPa.s	Approx. 85	EN ISO 3219
Pot life (100g at 25 °C)	Min	Approx. 80	
Minimum application temperature	°C	10	

Full chemical 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.

Accessories

To be ordered separately

- DE NEEF® IP 1C-Manual hand pump.
- DE NEEF® IP 1C-Compact electrical airless diaphragm pump.
- DE NEEF® Washing Agent
- Packers and connectors.

(Please consult the relevant data sheet).

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 SDW.

Apply a layer of Multitek Adhesive SDW, 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 (300rpm) until a homogeneous liquid is obtained. Never mix more material than the quantity that can be used up within 60 minutes.

Heat is generated by the exothermic reaction when Components A and B are mixed and temperatures will increase over time. Do not mix more than 500 g at a time or leave more than 500 g of material in the injection equipment for a period longer than 60 minutes to prevent production of intense heat and smoke.

MIXING RATIO A B

	Component A	Component B
By weight	100	30
By volume	89,5	32

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 DE NEEF®Washing Agent

Packaging

3kg set

A-component: metal pail

Net : 2.3kg (Gross: 2.47kg)

B-component: metal pail

Net : 0.7kg (Gross: 0.78kg)

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

DE NEEF®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.

Health and Safety

Read and understand the product label and Safety Data Sheet (SDS) for each system component. All users should acquaint themselves with this information prior to working with the products and follow the precautionary statements. Always wear protective clothing, gloves and protective goggles. SDSs can be obtained by contacting your local GCP representative or office.

Certification

De Neef Conchem nv/sa Industriepark 8 B-2220 Heist-op-den-Berg Belgium 09	
EN 1504-5 Concrete Injection Force transmitted filling of cracks U (F1) W(3) (1/2) (10/40) (0)	
Adhesion By Tensile Bond Strength	≥ 2N / mm ²
Adhesion By Slant Shear Strength	Monolithic failure
Shrinkage	3%
Glass Transition Temperature	> 40°C
Workability	Crack width from 0.3mm
Moisture State Of The Crack	Dry and damp
Durability	Pass
Corrosion Behavior	Deemed to have no corrosive effect
Dangerous Substances	Complies with 5.4

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Last Updated: 2024-01-23

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