



# EPO FLUID

## Epoxy repair and anchor resin

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- ▷ **Bonding fresh concrete to hardened**
  - ▷ **Fixing and anchoring reinforcement rods in concrete**
  - ▷ **For repair and restoration of concrete cracks**
  - ▷ **Excellent adhesion to almost any type of building materials**
  - ▷ **High Mechanical Strength**
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### Description

EPO FLUID is a solvent-free two-component liquid epoxy mortar. It consists of epoxy resins of high mechanical and chemical strength with excellent adhesion to concrete and steel. It is resistant to acids, alkalis, sea water with excellent results and on fresh concrete.

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### Certifications

CE Marking with Declaration of Performance (DoP) C04801-CPR- 2220801 according EN 1504-4: 2004 as a two-component epoxy-based adhesive used for bonding structural elements, concrete restoration and repair and restoration of cracks and C08401-CPR-2220810 as anchoring product for reinforcing steel bars according and EN 1504-6:2006.

Complies with Directive 2004/42/EC for binding primers (product subcategory h, type SB) with a maximum VOC content of less than 750 g/L. The VOC of the final product to be used is less than 50g/L.

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### Uses / Benefits

EPO FLUID is suitable for:

- Bonding of reinforcing bars on concrete and bases of machines
  - As a bonding bridge of fresh concrete to hardened as well for terrazzo and micro-pebble coverings created with the hydraulic binder NOVACEM CREATIVE
  - Repair of cracks in cement mortars, concrete, industrial floors
  - Restoration of horizontal and vertical elements
  
  - Resistant to alkalis and mild acids
  - Non shrinkage
  - Impermeable to liquids
  - The individual components with different colors for better mixing control
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## Technical Data

### Product Identification

Consistency	Fluid
Colour	Grey
Mixing Ratio (A/B)	3 : 1
Dry Solids Content	> 99%
Density	1,52 ± 0,03 kg/L
Viscosity (Brookfield) at 20°C	44 P
Pot life at 25°C	45 min
Application temperature	+5 to +35°C

### Application Data (+23°C / 50% R.H.)

Contact dry	2.5 h
Initial hardening	5.5 h
Final hardening	24 h

### Final Performance according to EN 1504-4:2004

	Performance
Compressive strength	90 N/mm <sup>2</sup>
Shear adhesion strength of hardened concrete to hardened concrete	8,5 N/mm <sup>2</sup>
Shear adhesion strength for fresh concrete to hardened concrete	7,1 N/mm <sup>2</sup>
Workable life	45 min
Modulus of elasticity in compression	2400 N/mm <sup>2</sup>
Glass transition temperature	40°C
Total shrinkage for structural bonding	0.087%
Coefficient of thermal expansion	70 x 10 <sup>-6</sup> K <sup>-1</sup>
Durability	Pass*
Reaction to fire	Class F

\*: *The compressive shear load at failure after exposure to thermal cycling shall not be less than the lowest tensile strength of the bonded or the original concrete.*

### Final Performance according to EN 1504-6:2006

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	Performance
Pull out	0.5 mm, pass
Chloride content	0.01%
Reaction to fire	Class F

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## Application Procedure

### Substrate Preparation

Cementitious substrates must be solid and free of dust, salts, grease and any other materials that could reduce adhesion. If deemed appropriate, the removal is done by mechanical means such as sandblasting, sanding with a wire brush, etc. In case of cracks as well as anchorages, clean the inside of the crack/hole with convincing air. Metal surfaces must be free of any surface oxidation - rust.

### Preparation of the mix

Before mixing the two ingredients, it is necessary to mix each ingredient separately in its respective container. Then the two components are mixed very well together, until a perfectly homogeneous mixture of grey color is created. Partial mixing of the two components is not recommended, but if required by the application, the ratio of the two components must be meticulously observed as indicated on the container labels.

### Application

As a bonding bridge between old and new concrete and for the NOVACEM CREATIVE terrazzo and micro-pebble coverings, it is applied with a brush, spatula or spraying. Apply the new layer of cementitious coating while the layer of EPO FLUID remains fresh, 1-1.5 hours.

It is applied as an anchor casting agent after mixing the material directly from the container. Fill the preform hole approximately 60% so that a small amount of resin overflows from the hole when the anchor is installed. Make sure there are no air gaps inside the hole.

As a filling material for cracks depending on the width of the crack from injectable equipment, nozzles and handguns or special equipment, as well as a trowel or spatula. In translucent cracks, precede surface plastering of one side with the epoxy paste EPO PASTE.

## Recommendations

Do not apply EPO FLUID to:

- Substrate and ambient temperatures below +5°C and above +35°C
- Relative atmospheric humidity > 80%
- Prolonged exposure to acids, bases, solvents, etc. medium and high concentrations
- Improperly prepared surfaces
- For sealing expansion joints
- In case of anchors where the diameter of the hole is not at least 3 mm larger than the anchor
- It is recommended that the application be done by a professional user and the partial mixing of the two components is the sole responsibility of the user

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## Consumption

A quantity of 0,3-0,5 kg/m<sup>2</sup> is required for adhesion between fresh and old concrete depending on the substrate or 1,5 kg/L of the cavity when applied by injection.

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## Storage

EPO FLUID remains stable for at least 18 months in the original sealed packaging protected from frost and direct sunlight.

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## Cleaning

Tools should be cleaned immediately with the solvent NOVATHINNER PU if EPO FLUID is fresh. Once hardened, cleaning can be done only by mechanical means.

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## Package

Metallic buckets of 1 kg.

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## Safety Instructions

For information and instructions regarding disposal and safe handling, users should refer to the latest Safety Data Sheet of the product containing ecological, toxicological and other safety related data.

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## Legal Notes

The technical data and recommendations contained or listed in this leaflet are the result of laboratory measurements, of our current knowledge and experience. All the above-mentioned information and specifications should in any case be considered as indicative, as they may differ from each other. The Company makes every effort to ensure the accuracy of the information provided herein. Product specifications, prices and availability are subject to change without notice and may differ from those shown.

In practice, variations in materials, substrates and on-site implementation conditions are such that no warranty can be given or implied, as to the merchantability or suitability of the materials for a particular purpose and for the exact conditions of each project. Anyone interested of using the product must be sure beforehand that the product is suitable for the intended use and in any case, the user is solely responsible for any consequences due to the use of the product. Among other things, the Company is not responsible for any normal wear or tear from environmental or other inappropriate conditions. We reserve the right to revise or change the data herein without prior notice.

Restrictions and disclaimers apply to the extent permitted by applicable law. The Company has a Technical Support Department, which is the only one responsible for providing technical advice and solutions to deal with problems. Requests to the Technical Support Department are addressed and answered, only in writing.

For the latest and a valid version of the Technical Data Sheet, the user of the material must refer to our website [www.novamix.gr](http://www.novamix.gr) or directly to the QR Code of the product.



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