

ADINGPOKS-I

Low viscosity, solvent free, two-component epoxy resin-based compound for injection and grouting. Compliant to: EN 1504-5/1,4/4,5/4,6

Field of application:

It is used for repair of building and engineering structures where it is necessary to achieve structural bonding which enables to ensure the initial static resistance [strength] of the structure under repair. Additionally, it establishes an efficient barrier against water penetration and chemical attack on concrete and reinforcement. Due to its low viscosity, Adingpoks-I is used for injecting and grouting of cracks which measure 0.1 mm to 0.8 mm in width. It is used for repairing massive concrete structures, reservoirs, bridge structures, silos, cooling towers, masonry structures, stone structures, etc.

Properties:

- Low viscosity two-component resin;
- Solvent-free;
- No shrinkage occurs in the process of bonding;
- Excellent adhesion to dry and wet substrate;
- High compressive strength;
- High chemical and mechanical resistance;
- Watertight;
- High powerful penetration in the substrate;
- Suitable for application by pouring/grouting and by mechanical injection using injection pumps.

Technical features:

Appearance of A component:	Transparent liquid
Appearance of B component:	Amber viscous liquid
Mixing ratio:	A:B = 2.3 : 1
Density (A component):	1,04 - 1,1 g/cm ³
Density (B component):	0,96 - 1,0 g/cm ³
Density (A + B component):	1,05 g/cm ³
Workability at temperature T=23°C	max. 60 minutes
Complete hardening at temperature T=23°C	7 days

METHOD STATEMENT:

Substrate preparation:

The crack which is to be treated with Adingpoks-I should be clean, grease-free, dusted and without accumulation of water. It is mandatory to remove all crumbly and unstable parts. The substrate should be cleaned by applying compressed air or strong water jet, or mechanically by grinding. The temperature of the substrate on which the works are carried out should be between 10°C and 30°C. The air temperature during the execution of works should be between 10°C and 30°C.

Placement:

Before mixing A component and B component together, they should be stirred individually. The compound is prepared by pouring B component into A component and mixing them together with a slow electric mixer (300 – 500 revolutions/min.) in order to prevent air from entering into the mixture. The compound should be mixed until obtaining a completely uniform mixture without any residues at the bottom or on the walls on the packaging. The amount of material prepared must match the dynamics of application and the ambient conditions (temperature). When injecting ADINGPOKS-I, injection packers (filler necks) are fixed at the cracks at an angle from the surface of the girder (0-45°) so that the nozzle of the packer cuts through the crack. The opening around the packer must be sealed by applying the epoxy resin-based sealant Adingpoks-K or some other appropriate material (some packers are equipped with embedded mechanism which expands and seals the opening). After fixing the packers, the crack may be sealed with epoxy sealant Adingpoks-K or some other appropriate material, where necessary, in order to avoid spilling of Adingpoks-I during the process of injection. The distance at which packers are fixed depends on the width and depth of the crack. Best results are achieved when injecting takes place in several phases. In the first phase, the packers are being fixed (at some assumed distance) and the penetration of the injection material is monitored. In the second phase, a second line of packers (at a smaller distance) are fixed in the sections of the cracks where injection was not completely carried out during the first phase.

For better control of the effects of injection, it is possible to leave inspection holes in order to monitor the penetration of epoxy resin through the crack. The application of the prepared material is done by injection under pressure (through the packers) by using the appropriate equipment – injection pump for one-component materials. In vertical cracks, the injection of Adingpoks-I begins with the packer fixed on the lowest position in order to avoid air entrapment in the crack.

24 hours after filling the cracks and after the material has hardened, the packers should be removed and the openings should be treated with epoxy resin-based sealant Adingpoks-K.

Alternatively, in horizontal cracks, Adingpoks-I can also be applied by grouting. For that purpose, the material and the substrate should be prepared as described above, and the crack should be mechanically opened, cleaned and dusted. The crack may not be filled with water or other material. Before grouting, it is recommended that you protect the sides with self-adhesive tape which is removed immediately after the process of grouting. The grouting itself should be done continuously, from one side of the crack to the other, at a speed which allows the resin to enter and fill in the crack completely.

The cracks treated with Adingpoks-I can be subjected to mechanical or chemical load after 21 days from the treatment.

Consumption:

Adingpoks-I (A + B component) 1050 kg/m³

Cleaning:

The tools and equipment should be cleaned with Solvent-P immediately after their use. The hardened material should be removed mechanically.

Packing:

In a set of 3.7 kg

A component: 2.6 kg

B component: 1.1 kg

In a set of 19.8 kg

A component: 13.8 kg

B component: 6.0 kg

Storage:

In a dry area, in original, closed packaging, at temperature between 10°C and 30°C, protected from exposure to direct sunlight and freezing. Shelf life: 9 months.

Health hazards: Avoid contact of the product with skin and eyes, as well as direct inhalation while mixing the A component and B component. In case of accidental contact, the product should be immediately removed by using a dry towel or a towel slightly soaked in SOLVENT-P, and afterwards the spot should be thoroughly washed with clean water and soap. If the material splashes into the eyes, immediately rinse the eyes with clean water and seek medical advice. It is necessary to ensure proper ventilation of the premises in which resins and solvents are used.

Fire: Adingpoks-I does not contain solvents. Solvent-P contains flammable solvents. They must not be used near open fire and it is not allowed to smoke during the application.

Cleaning and disposal: Loose residues of Adingpoks-I should be cleaned with Solvent-P. The old and used packaging should be disposed of in accordance with the local rules and regulations for that type of waste.

We recommend that the method of application and the necessary quantities should be adjusted to the conditions of the building, as well as mandatory use of appropriate equipment.