ADINGPOKS 1

Two-component, low viscosity, transparent epoxy resin without solvents, used for impregnation and protection of concrete surfaces
In compliance with EN 1504-2:2004/ 2.2 (C); 5.1 (C); 6.1 (C); 8.2 (C) and EN 13813:2002/SR B2.0-IR20

FIELD OF APLICATION

ADINGPOKS 1 is used for protection of concrete surfaces exposed to physical-mechanical influences and chemical aggression, and for impregnation and improvement of the physical-mechanical properties of concrete.
For structural repairing of concrete surfaces by filling or injecting cracks and for grouting anchors.
When mixing with quartz sand, epoxy mortar with high physical-mechanical characteristics can be obtained, which can be used for structural reparation of concrete structures.

PROPERTIES

- High adhesion to the substrate;
- High resistance to abrasion;
- High resistance to diluted acids;
- Resistance to solutions of salts and mineral oils;
- Solvent free;
- Non- toxic when bonded;
- Bacteriologically resistant;

TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance (A + B component)	-	transparent viscous mixture
Mixing ratio	-	A:B=2:1
Density	EN ISO 2811-1	1,0-1,1 g/cm³
Temperature stability		from -20 ° C to + 70 ° C .
Substrate adhesion	EN 1542	≥ 2MPa
Capillary absorption and water permeability	EN 1062-3	w <0,1kg / m²h1 / 2
Water vapor permeability	EN ISO 7783-1	class III Sd> 50m
Abrasive resistance	EN ISO 5470-1	<3000mg
Impact resistance	EN ISO 6272-1	class II ≥10Nm
Resistance to strong chemical aggression (petrol, diesel, motor oil, 10% CH3COOH, 20% H2SO4, 20% NaOH, 20% NaCl)	EN 13529	class II, hardness reduction ≤ 50%
Compressive strength	EN 12190	>60MPa
Open time for installation at a temperature of 20 ° C	EN ISO 9514	50-70min
Time between application of the first and second layer at 25 ° C	-	24h
Initial hardness on day 1, at 25 ° C, Shore D	EN ISO 868	45-55
Initial hardness on day 7, at 25 ° C, Shore D	EN ISO 868	60-70
Substrate and air temperature during installation	-	10-30˚C
Mechanical use for easy traffic at a temperature of 20˚C	-	After 3 days
Mechanical use for heavy traffic at a temperature of 20˚C	-	After 7 days
Chemical use (including contact with water), at 20 ° C	-	After 15 days

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METHOD STATEMENT

Substrate preparation

The concrete substrate should be solid, dry, clean, and free of grease, dust-free, water condensate-free and must be waterproofed in order to prevent the occurrence of negative hydrostatic pressure. The humidity of the concrete substrate should be less than 7%, and the temperature during installation should be between 10-30 ° C. The relative humidity of the air during installation should be less than 70%, in order to avoid condensation on the processing surface. If this limitation is not observed, aesthetic changes to the coating can be expected, but the physical and chemical properties of the material will remain unchanged.

New concrete substrate

The concrete should be at least 28 days old, have a minimum compressive strength of 25 MPa and not contain more than 7% humidity. Spilled cement laitance, mortar residues, paint stains and oil need to be removed mechanically. Finally, the substrate should be dusted with an industrial vacuum cleaner.

Old concrete substrate

Removal of cement laitance, penetrated grease and impurities in the substrate should be done mechanically. All damage to the substrate should be repaired using appropriate materials intended for structural repair of concrete structures.

Old epoxy substrate

For repair of existing epoxy surfaces, before applying the new epoxy coating, it is necessary to assess the quality of the old epoxy coating by testing the adhesion (pull-off test). If the obtained results are satisfactory, it is necessary to make a slight machine work and decontamination of the substrate. If the results are not satisfactory, the old epoxy substrate needs to be completely removed.

APPLICATION OF ADINGPOKS 1 AS COATING FOR IMPREGNATION AND PROTECTION OF CONCRETE SURFACES

Adingpoks 1 as a coating is applied to the substrate in uniform thickness, with the help of a rubber trowel or roller with woolen fibers. On highly porous substrates it can be applied in two layers. Construction joints need to be filled with epoxy putty. The material is prepared by mixing components A and B with a slow electric mixer (300 to 500 rpm) until complete uniformity. The amount of material to be mixed should be in accordance with the open working time of the product.

GROUNDING AND INJECTION OF CRACKS AND ANCHORS

When performing structural reparation of concrete elements, Adingpoks 1 can be used to fill the existing cracks in the concrete. The material is prepared by mixing components A and B with a slow electric mixer (300 to 500 rpm) until complete uniformity, and applied by direct pouring (for horizontal surfaces) into the crack. Alternatively, the prepared Adingpoks 1 material can be applied by pressure injection into the crack through pre-installed packers. Prior to application, the crack should be cleaned of dust and retained water.

The prepared material Adingpoks 1 can also be used for grounding steel anchors.

PREPARATION OF EPOXY REPAIR MORTAR

Epoxy mortar is prepared by slowly mixing components A and B of Adingpoks 1 (until completely uniform), and then add quartz filler. Recommended ratio Adingpoks 1: Filler S/H = 1:4 to 1:6. A slow mixer is used for mixing. The surface where the plaster is applied is finally leveled with a steel trowel, whereby the material is pressed until complete closure of the surface structure. If necessary, Adingpoks 1 or other epoxy coating can be applied as a finishing coat to completely close the structure.

As an illustration, the following table shows test results of the epoxy mortar prepared with Adingpoks 1 and Filler S / H (0.3-0.8 mm). Mixing ratio is Adingpoks 1: Filler S / H = 1:4

FEATURE	METHOD	DECLARED VALUE
Mixing ratio	-	A+B : Filler S/H (0,3-0,8 mm) = 1 : 4
Bending strength	EN 12190	>15MPa
Compressive strength	EN 12190	>40MPa

• When using epoxy mortar for concrete reparations, it is necessary to perform previous testing.

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CONSUMPTION

Adingpoks 1 (as a coating): 0.2-0.4 kg / m²
For thickness of 1cm (consumption of epoxy repair mortar): 15 - 17 kg / m²
(Adingpoks 1: Filler S / H (0.3-0.8 mm) = 1: 4)

CLEANING

Tools and equipment should be cleaned with Solvent P immediately after use.

PACKAGING

In sets A + B: 3kg
Component A: 2kg
Component B: 1kg
In sets A + B: 9kg
Component A: 6kg
Component B: 3kg

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.

CE MARKING

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EN 1504-2:2004

ADINGPOKS 1

Epoxy surface protection system for concrete, for moisture control and improved physical and chemical resistance

Adhesion strength by pull-off test	**≥ 2,0 N/mm²**
Capillary absorption and permeability to water	**w < 0,1 kg/m²·h^{0,5}**
Permeability to water vapour	**Class III, S_D > 50 m**
Abrasion resistance	**< 3000 mg**
Impact resistance	**Class II ≥ 10 Nm** **After loading, no cracks, no delamination**
Resistance to severe chemical attack	**Class II: 28 days without pressure** **≤ 50% reduction in Shore hardness after treatment in test liquids: petrol; diesel and motor oil;** **10% CH_3COOH; 20% H_2SO_4; 20% NaOH; 20% NaCl**
Reaction to fire	**Class F**
Dangerous substances	**No performance determined**

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 with the skin, the product should be immediately removed by using a dry towel or a towel slightly soaked with 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: The product is not flammable.
Cleaning and disposal: Loose residues of Adingpoks-1PV 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.
Additional information is provided in the Product Safety Data Sheet.

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