

ADINGPOKS AKVA

*Epoxy-cement based coating/mortar for reparation and surface protection of concrete;
Compliant to EN 1504-2, method 1.3(C), 2.2(C), 8.2(C), 5.1(C) and EN 1504-3, method 3.1, 7.1*

FIELD OF APPLICATION

Adingpoks Akva is tri-component, epoxy-modified cement mortar for reparation and surface protection of concrete and reinforced concrete structures.

Adingpoks Akva is used for:

- Skimming and leveling of surface imperfections up to 3 mm on vertical and horizontal surfaces, as well as curved surfaces (tunnels, domes etc.);
- Protection of concrete in chemically aggressive environments, protection from carbonation and freezing;
- Increase physical-mechanical properties of concrete surface;
- Enables surface protection of concrete from ingress, moisture control and increased physical resistance according EN1504-2
- Reparation of concrete according EN 1504-3
- Active coating of the reinforcement (control of anodic area)

PROPERTIES

- High strength characteristics;
- High resistance to wearing (abrasion);
- Waterproofed;
- Vapor-permeable;
- Excellent adhesion to moist and dry concrete;
- Increases adhesive bonding between old and new concrete or repairing mortar
- Enables quick application of secondary coatings;

TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance		
A component		white liquid
B component		light yellow liquid
C component		cement powder
Mixing ratio		A:B:C = 1:1,5:7
Density	EN 1015-6	1,8-1,9 g/cm ³
Pot-life at 20-25°C	EN ISO 9514	30-40min
Permeability to CO ₂	EN 1062-6	S _D >50m
Permeability to water vapor	ISO 7783	Class II 5m≤S _D ≤50m
Capillary absorption and permeability to water	EN 1062-3	< 0,1kg/m ² *h ^{0.5}
Adhesion pull-off test	EN 1542	≥ 2N/mm ²
Abrasion resistance	EN ISO 5470-1	< 3000mg
Thermal compatibility	EN 13687-1	≥ 2N/mm ²
Resistance to impact	EN ISO 6272-1	Class III ≥20Nm

CONCRETE REPAIR

Chemical resistance	Increases chemical resistance of concrete in aggressive environments (prevents ingress of carbon and sulfuric gasses). Material is not used for protection from intense chemical aggression (impact of acids and alkaline).	
Compression strength	EN 12190	≥ 45N/mm ²
Bending strength	EN 12190	≥ 5N/mm ²
Presence of chlorides	EN 1015-17	≤ 0.05%
Module of elasticity	EN 13412	≥ 15 GPa
Limited shrinkage / expansion	12617-4	≥ 2N/mm ²
Capillary absorption	EN 13057	≤ 0.5kg/m ² *h ^{0.5}

METHOD STATEMENT:

SUBSTRATE PREPARATION

Concrete substrate on which material is applied must be clean, sound, firm and free of dust and grease. Cement bleeding residues and traces of paint and oils must be cleaned mechanically or chemically. Ambient and substrate temperature need to be 10-30°C. In case of reparation of old and damaged concrete elements, exposed steel reinforcement and anchors must be cleaned from corrosion, remains of paint and oil (using steel brush or sand-blasting). In order to achieve higher adhesion, on porous concrete substrates it is recommended to apply Adingpoks Akva Prajmer prior to application of Adingpoks Akva.

It is recommended to apply Adingpoks Akva minimum 7 days after the casting of concrete in order to avoid crack formation due to initial shrinkage of concrete. In case when primer is not applied on the substrate, prior to application of Adingpoks Akva concrete must be saturated with water.

APPLICATION

Prior to application, components A and B must be mixed separately. Then, component B is slowly added to the component A and it is mixed constantly using slow electrical mixer (300 to 500 rot /min) until complete homogenization. To these mixture, component C is gradually added and again mixed until homogenization. Application of material is carried out manually with metal trowel, or by spraying in layers 1 mm to 3 mm thick. In case of application using pump for spraying, in order to increase workability of material, in the mixture (A+B+C) 3% do 4% water can be added and mixed until homogenization.

CONDITIONS AND LIMITATIONS OF APPLICATION

Adingpoks Akva should be applied on the concrete surface pre-coated with Adingpoks Akva Primer or directly to concrete saturated with water. Temperature of concrete substrate and ambient temperature during application and 24 hours after application need to be between +10°C and 30°C, and relative humidity lower than 70%. During this period, applied material need to be protected from direct exposure to sun and wind. In case of application in closed spaces, it is necessary to provide ventilation.

In the case of application by spraying, if Adingpoks Akva is diluted with higher quantity of water than recommended, it can cause segregation, uneven layer of material on the vertical surfaces and crack formation.

CONSUMPTION

Adingpoks Akva, for one layer 1mm thick (A+B+C): 1,5-2,0 kg/m²

CONCRETE REPAIR

