

ADINGPOKS AKVA 1B

Two-component water based epoxy coating for protection of concrete surfaces exposed to mechanical and chemical aggression.

Compliant to EN 1504-2: 1.3(C); 2.2(C); 5.1(C); 6.1(C); 8.2(C)

FIELD OF APPLICATION

Epoxy coloured coating for protective and decorative finish of concrete wall surfaces and ceiling surfaces made of concrete in: tunnels, industrial and infrastructure objects, warehouses, public objects with high requirements for hygiene, etc. In highway traffic, rail and hydro-technical tunnels, Adingpoks Akva 1B provides a high degree of protection from carbonization, ice, salt and abrasion.

Used for protection of concrete structures exposed to abrasion from running water (submerged columns in river bridges or hydro-technical tunnels). In order to achieve a higher degree of protection of construction, Adingpoks Akva 1B can be applied in combination with an epoxy based primer or a hydrophobic impregnation coating.

PROPERTIES

- High carbonation protection;
- Watertight;
- Vapor-permeable;
- Chemical resistance to thinned acids, alkaline, salt solutions and mineral oil;
- Excellent adhesion to substrate;
- Abrasive resistance
- Mechanical resistance;
- Non-toxic when cured;
- Bacteriologically resistant;
- Easy to maintain, enables cleaning with water under pressure;

TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance	-	Colored paste mixture
Adhesion strength (bond)	EN 1542	≥ 2,0MPa
Capillary absorption and permability to water	EN 1062-3	$w \leq 0,1 \text{ kg/m}^2 \text{ h}^{1/2}$
Permeability to water vapor	ISO 7783	class I $S_d < 5 \text{ m}$
Permeability to CO ₂	EN 1062-6	$S_d > 50 \text{ m}$
Abrasion resistance (CS 17)	5470-1	< 3000mg
Resistance to impact	EN ISO 6272-1	class II $\geq 10 \text{ Nm}$
Resistance to strong chemical aggression (gasoline, diesel, engine oil, 10% CH ₃ COOH, 20% H ₂ SO ₄ , 20% NaOH, 20% NaCl)	EN 13529	class I, reduction of shore hardness ≤50%
Tough dry (at 25 °C)	-	24 h
Pot life (at 20 °C)	-	approx. 90 min.

Cross-cut test ISO 2409:2013 classification 0 - the edges of the cuts are completely smooth; none of the squares of the lattice is detached

PROTECTIVE COATINGS

METHOD STATEMENT:

SUBSTRATE PREPARATION

The concrete substrate should be sound, dry, clean, grease-free dust free, and it should be protected from water penetration and negative hydrostatic pressure and protected from vapor condensation. The humidity in the concrete substrate should be lower than 7%. For application on porous substrates, we recommend pre-coating with water based epoxy primer Adingpoks Akva Primer, water based epoxy coating Adingpoks Akva or material for hydrophobic impregnation Fasil V. Application can be done manually by using a paint roller, or by spraying.

New concrete substrate

The substrate should be older than 28 days with minimal compressive strength of 25 MPa with humidity lower than 7%. Stains of paint and grease must be removed.

Old concrete substrate

In order to achieve good adhesion to the concrete, it must be sound and clean, and have a minimum compressive strength of 25 MPa. Mortar residues and other pollutions should be removed mechanically or using chemical cleaners. Any damage should be repaired using appropriate materials for structural reparation.

Old epoxy substrate

Easy grinding of the substrate with sandpaper and cleaning of the old coating substrate is required. It is recommended to make a test field and examine the achieved adhesion.

APPLICATION

The material is prepared by separately mixing components (2-3min) with a slow electric mixer and then adding A component to B component and mixing them together with a slow electric mixer (at max. speed of 400 rpm) until a completely uniform mixture is obtained. If necessary, the material can be diluted with 5-10% water. The application should be carried out in accordance with the pot life of the material, in approx. 90 min.

The material can be applied manually by paint brush, roller, or by spraying with *airless* pump in two or three layers. The next layers should be applied after hardened first layer, i.e after 4 – 24h at ambient temperature of 10-35 °C and relative humidity less than 70%. Maximal thickness of wet film of coating applied in one layer should be 200 – 300µm, otherwise can come to sagging of the material. Declared values of the material for protection of concrete are examined at dry film thickness of 140 µm.

CONSUMPTION

Adingpoks Akva 1B, for one layer: 0.15 to 0.30 kg/m²

Adingpoks Akva 1B, for two layer: 0.35 to 0.60 kg/m²

CLEANING:

The tools and equipment should be cleaned with water immediately after use.

STORAGE

In the original closed packaging, in dry premises, at temperature between 10°C and 35°C, protected from direct sunlight and freezing temperatures.

Shelf life: 9 months.

STANDARD COLOR

White colour RAL 9003;

At the request of the client, it is possible to produce the product in another colour.

CE MARKING

<p style="text-align: center;">CE 2032</p>	
<p style="text-align: center;">ADING AD Skopje, Novoselski pat (ul.1409) No.11, 1060 Skopje, N. Macedonia 19</p>	
<p style="text-align: center;">GOAC0XX/4 EN 1504-2 : 2004 ADINGPOKS AKVA 1B Two component water based epoxy coating for concrete ingress protection and for increasing physical and chemical resistance</p>	
Permeability to CO2	Sd > 50 m
Permeability to water vapour	Class I , Sd ≤ 5 m
Capillary absorption and permeability to water	≤ 0.1 kg/m ² · h ^{0,5}
Adhesion strength by pull-off test	≥ 2,0 N/mm ²
Impact resistance	Class II ≥ 10 N/m , no cracks, no delamination
Abrasion resistance	< 3000 mg
Resistance to severe chemical attack	Class I: 3 days without pressure ≤ 50 % reduction in Shore hardness after treatment in test liquids: petrol; diesel and motor oil; 10 % CH ₃ COOH; 20 % H ₂ SO ₄ ; 20% NaOH; 20% NaCl
Reaction to fire	Класа B – s1, d0
Dangerous substances	No performance determined

Health hazards: Avoid contact of the product with skin and eyes and avoid direct inhalation when mixing the components. In case of accidental contact with skin, remove it immediately by using a dry towel or a towel lightly soaked in water, and then wash the skin thoroughly with clean water and soap. If the material splashes into the eyes, immediately rinse the eyes with clean water and seek medical attention. Additional information is provided in the Safety Data Sheet of the product.

Fire: Ensure ventilation of the premises where epoxy resins are handled.

Cleaning and disposal: Loose residues of Adingpoks Akva 1B should be cleaned with water. The old and used packaging should be disposed of in accordance with 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 on site, as well as mandatory use of appropriate equipment.