

# HIDROFOB 21

*Water resisting admixture for concrete and mortar used for preventing capillary absorption and formation of water-repellent surfaces*

*In compliance with: EN 934-2: T9*

## FILED OF APPLICATION

As concrete admixture, Hidrofob 21 prevents capillary absorption of water through concrete sections, making the concrete water-resistant and the concrete surfaces water-repellent. It increases durability of concrete subjected to permanent contact with water and exposed to chemical aggression. Recommended for objects in contact with sea water, ice, chemical industry and objects exposed to carbonation (e.g. underground structures, harbor facilities, tunnels, reservoirs, bridges, foundations, retaining walls). For prefabricated pavement elements, in addition to water-resistance, Hidrofob 21 improves application of concrete, increases compactness, strength characteristics and durability of finished elements. Furthermore, Hidrofob 21 improves aesthetic appearance of the elements, edges are smooth and water-repellent, and the efflorescence is decreased.

Usage of Hidrofob 21 changes surface tension of the concrete section, thus forming water-repellent surfaces and preventing ingress of water and harmful substances in the concrete (chlorides, sulfates etc).

## PROPERTIES

- Changes surface tension of the concrete, thus preventing absorption of water and harmful substances in the concrete structure
- Increases concrete resistance to penetration of water under pressure;
- Reduces concrete capillary absorption;
- Prevents penetration and migration of chlorides inside concrete;
- Decreases carbonation of concrete;
- Decreases concrete efflorescence;
- Increases durability of concrete exposed to ice, salt and high concentration of CO<sub>2</sub>;

## TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance	Visual	white liquid
Density (at 20°C)	ISO 758	(0,98÷1.02) g/cm <sup>3</sup>
pH-value (at 20°C):	ISO 4316	9±1
Chlorides content:	EN 480-10	≤0.1%
Alkali content:	EN 480-12	≤2.0%

## DOSAGE AND PERFORMANCE:

Hidrofob 21 is added in the fresh concrete mixture during the production of concrete. Optimal dosage of Hidrofob 21 is between 0,2% to 0,7% of the cement mass in the concrete mix. In order to achieve high performances of water-resistance and water-repellent surfaces of concrete, it is recommended for Hidrofob 21 to be used for concrete with strength above 30MPa. It is also crucial for the complete process of production, transport, application and curing of concrete to be appropriate to the construction site conditions.

## COMPATIBILITY

Hidrofob-21 is compatible with number of additives from ADING production program. Hidrofob-21 is compatible with all types of Portland cement, including sulfate-resistant cements. If two or more additives are used in the concrete mixture, it is necessary to make preliminary tests. In order to achieve high water-resisting effects, it is recommended to use Hidrofob-21 in combination with water reducing admixtures - plasticizers and superplasticizers. For construction of waterproofed objects with implemented system "White tank" it is recommended to use poly carbocsilate - based superplasticizers (Superfluid-21EKO). Various additives are dosed separately i.e. they are not to be inter-mixed prior to application in the concrete mixture.


## PACKAGING

Plastic bottle: 1 kg  
Plastic cans: 5 and 20 kg  
Plastic barrels: 200 kg  
Containers: 1000 kg

## STORAGE

In original package at temperatures from 5°C to 35°C, protected from direct sunlight. Shelf life: 6 months.  
\*In case the storage takes longer than 3 months, material must be mixed prior to use.

## CE MARKING

 2032	
ADING AD Skopje, Novoselski pat (ul 1409) br.11 1060 Skopje, North Macedonia 14 GAED001/6 EN 934-2:2009+A1:2012 <b>HIDROFOB 21</b> Water resisting admixture for concrete EN 934-2:T9	
Chloride ion content	<b>≤ 0,1% by mass</b>
Alkali content	<b>≤ 2,0% by mass</b>
Corrosion behaviour	<b>Contains components only from EN 934-1:2008, Annex A.1</b>

**Health hazard:** Hidrofob 21 does not contain toxic substances, however contact with the skin and eyes should be avoided, and material should not be swallowed. In case of contact to skin or to eyes, rinsing is required with clean running water. If swallowed, medical assistance must be immediately requested. Additional formations are provided in Material Safety Data Sheet for the material.

**Fire:** Hidrofob 21 is a non-flammable liquid. Additional formations are provided in Material Safety Data Sheet for the material.

**Cleaning and deposit:** Hidrofob 21 is cleaned with water. Old and used packaging must be disposed according to local regulations for that type of waste. Additional formations are provided in Material Safety Data Sheet for the material.