

PowderCoat

Waterproof Surface Coating / Penetrant Powder

PowderCoat is a cement-based powder for waterproof concrete surfaces. This product is a mixture of mineral and cementitious compounds that is applied on the final surface of the concrete and reacts with some products of hydration reaction (C3S) and develops water-resistant crystalline by penetrating inside the concrete pores. It should be noted that this product is resistant to negative and positive hydraulic pressures of the water.

This product is produced based on the general requirements of grade MC of the Iran National Standard No.18330-2. This product also meets the requirements of grade MC requirements of the EN 1504-2 Standard.

The physical and chemical properties of PowderCoat are according to the following table and produced in the allowable changing range of Iran National Standard No.18330-2.

Physical State	Powder
Color	Grey
Material Base	Cementitious
Density	1/25 ± 0/05 g/cm ³

The usage and effect of the waterproof surface coating

The usage of the waterproof material

- Waterproofing the potable water tanks, pools, tanks, fountains, and other structures in contact with water against the negative and positive pressures
- Waterproofing the retaining walls and elevator shaft
- Waterproofing concrete roofs
- Waterproofing the surface cracks of the concrete with low width

The advantages of using the waterproof material

- It has a high penetration depth inside the concrete and leads to a reduction in the permeability of the concrete.
- It has self-repair property for cracks in contact with water
- It is resistant to the attack of different destructive chemical ions and corrosive salts.
- It is non-toxic and usable in contact with potable water.
- It is resistant to the acid and alkaline environment

The instruction to use the waterproof material

The allowable range for using the waterproof material

- 1- Surface preparation:** clean the desired surface from contaminations like dust, oil, and other dirt.
- 2- Dispersing the dry powder on the fresh concrete:** Disperse 1.5 kg of the powder manually on the surface per square meter before final troweling the surface of the fresh concrete. To reach optimum use, it is better to release the powder near the surface of the concrete so that it is well dispersed in a suitable place. It is better to pour half of the aforementioned powder in one direction and the other half perpendicular to the direction and then complete troweling.
- 3- Using the grout on old concrete:** each 20 kg packet of the aforementioned product should be mixed with 7 to 8 liters of water at low speed to form a uniform grout. It is necessary not to last mixing for a long time and not to dilute the dense mortar with water. The dense mortar must be diluted by re-mixing the mixture. The

above grout must be applied on the surface with a suitable brush to cover all pores and joints. After setting the first layer and before drying, the troweling must be accomplished one more time with the grout. If the desired surface leaks, it is necessary to waterproof the area with the WaterCut product and then use grout.

The amount of using this product is 1.2 to 1.3 kg per square meter.

- 4- Curing:** the waterproofed surface must be kept wet for at least 48 hours. For this purpose, it is better to spray water 4 to 5 times a day for 48 hours. It is better to avoid commuting and loading for 7 days on this surface. Also, avoid keeping the fresh waterproofed surface in direct exposure to harsh wind, hot weather, rainfall, and freezing.

Safety tips for using the waterproof material

This product is based on Portland cement which is highly alkaline and is dangerous in contact with skin and breath. Therefore, it is necessary to use a suitable gown, goggles, and mask while working and take the following tips into consideration:

- Blink in water for at least 15 minutes in case of eye contact
- Wash your skin with clean water for 15 minutes in case of any contact with the skin
- The contaminated clothes must be washed with suitable detergents to be usable for further work.
- It is necessary to visit a doctor if the injured individual still feels uncomfortable

Other necessary notes about the waterproof material

The compatibility of the waterproof material with other products

It is better to consult the technical section of the Capco Company before the simultaneous use of this powder with other products.

The corrosion of the waterproof material

This product does not start or extend corrosion in the buried bars in concrete, the pre-stressed steel, floor systems, and the roof made of galvanized steel.

Transportation and storage of the waterproof material

The conditions and maintenance temperature of transportation

The allowable transportation and maintenance temperature of this product is between 5 and 35 °C. It is also necessary to consider the following tips:

- Avoid putting the container having the admixture in direct exposure to sunlight
- Avoid putting this product in direct contact with moisture.

The waterproof material lifetime

If the containers of this product are conserved and stored in a standard condition, they will be usable for 6 months.

The waterproof material packaging

This product is supplied in 20 Kg packets.

Complementary information

Contact the technical section of Capco Company for complementary information. You can also refer to the performance form of (PowderCoat-PPI) PowderCoat for more information.