

Penetron



"PENETRON" is a dry construction waterproofing penetrating mixture designed to waterproof concrete and reinforced concrete construction elements by increasing their water resistance, obtaining the property of "self-healing" cracks opening up to 0.4 mm in concrete.

"Penetron" waterproofing mixture is prepared according to TU 5745-001-77921756-2006. "Penetron" mortar mixture is applied to a thoroughly cleaned and moistened concrete surface, regardless of the direction of water pressure, from the inside or outside of the structure. The use of "Penetron" dry mixture prevents water from passing through the concrete structure with a crack opening of up to 0.4 mm. "Penetron" together with "Penecrete" dry mixture is used as an auxiliary material for waterproofing of cracks, seams, joints, junctions, communication entrances, and together with "Peneplug" and "Waterplug" dry mixtures to eliminate pressure leaks. "

After the "Penetron" solution mixture is applied to the wet concrete surface, the chemical components of the material penetrate deep into the wet concrete structure due to the resulting osmotic pressure. This process occurs only when there is water in the concrete structure. The chemical components of the "Penetron" mortar mixture react with the ion complexes of calcium and aluminum, resulting in the formation of insoluble crystals that fill the pores, capillaries and microcracks of concrete, becoming a part of the concrete structure. The process of crystal formation stops in the absence of water and resumes when it appears (for example, with an increase in hydrostatic pressure or the formation of a crack), which means that concrete cracks acquire the ability to "self-heal".

"Penetron" allows you to protect concrete from aggressive environments: acids, alkalis, sewage and underground water, sea water. Concrete treated with "Penetron" solution is resistant to carbonates, chlorides, sulfates, nitrites, as well as bacteria, fungi, algae and marine organisms. The use of "Penetron" dry mixture allows to increase the frost resistance and strength of concrete. Concrete treated with "Penetron" mortar mixture maintains vapor permeability. "Penetron" is environmentally safe, approved for use in domestic and drinking water supply (technical specifications, see table. 6.1.).

"Penetron" Technical characteristics.

No p. p.	Names of indicators	The value	Measurement methods
1	The technical characteristics of the dry		
1.1	Appearance	additive are gray free-flowing powder without mechanical impurities	TU 5745- 001- 77921756- 2006
1.2	Moisture by weight, %, less than 0.3	0.3	
1.3	Mass density in the standard unconsolidated state, kg/m3 1170±90 GOST 8735	1170±90	GOST 8735
2	Technical characteristics of the mortar mixture		
2.1	Installation time, min: - start - quick without being - do not finish - no later than 40	40 160	GOST 310.3
2.2	Density, kg/m3	1700±100	GOST 5802

3 Technical characteristics of concrete after processing		
3.1	3.1 Increasing the degree of water permeability of concrete after processing, stages, not less than 3 TU5745-001-77921756-2006	3 yy5745-001-77921756-2006
3.2	To increase the strength of the processed concrete in compression by not less than the initial, %, 5	5
3.3	Increasing the frost resistance of concrete after processing, cycles, not less than 100 GOST 10060.0	100 GOST 10060.0
4 Additional features		
4.1	Use permit for drinking water tanks granted TU5745-001-77921756-2006	Allowed
4.2	Application temperature, °y	From +5 to + 35 °y
4.3	Dry mixture storage conditions	It can be stored in any humid rooms at temperatures from -60 to +50 °y TU 5745- 001- 77921756- 2006
4.4	Guarantee period for storage of dry mixture, months, not less	18
4.5	UV exposure	It has no effect St. yy 5852

"Penetron" dry mixture is supplied in 5 and 25 kg packaging in sealed plastic buckets.

Chemical resistance and corrosion properties of concrete after treatment with "Penetron" are given in Appendix B.