

HYDROEFFECT

The table shows us the comparative characteristics of concrete made from known Penetron admix and Padmix modification, and from concrete with the usage of "HYDROEFFECT" trade mark water-repellent – a water-proofing agent for concrete surface treatment and as admix to PFD concrete – for extensional usage, and also the rates of application of **repellent composition**: a hydrophobisator and PFD, are given:

Admixture type	The Concrete Behavior after Adding the Additives						
	Absortion of water, at most %wt	Concrete grade by waterproofing capacity, no less	compressive strength of concrete	Increase of resistance to freezing and thawing, periodic times, no less	Plasticizing effect , not less, cm	Expenses	
						While processing the surface, kg/m ²	While adding admix to concrete, kg/m ³
Penetron	5	4	10	100	-	0,8-1,1	-
HYDROEFFECT hydrophobized composition - hydrophobisator, applying for concrete treatment	0,1	5	30	500	-	0,1-0,2	-
Padmix	5	4	10	100	information is not available	-	4,0
HYDROEFFECT hydrophobized composition - ПФД (Admix to concrete applying for extensional usage)	2	4	25-30	400	12-22	-	0,5-1

As the table shows while using repellent compositions and PFD water repellents for concrete production or using it for coating concrete surface, water absorption of concrete reduce more than twice, compressive strength of concrete increases in 2.5-3 times, its frost resistance increases in 4 times, however costs of modifier-additive significantly reduce. Thus, the concrete made by using **PFD water-repellent composition** has properties that allow it to be deployed in the industrial and residential construction as well as the construction of dams, subways, airfields, road constructions, and other facilities as a durable and high-quality building material. The repellent provides protection, recovery, restoration and conservation of the processed materials waterproofing them and protecting against capillary rise of moisture penetrating to a depth of 10 - 20 mm creating a polymolecular layer with a powerful chemical "cross-linking" of the coating itself and with the protected surface forms a single monolith. Consequently, the destruction of the coating can take place only under strong mechanical stimuli that can destroy the material itself.