

Portland Cement Type 5

Chemical Analysis		
Component	Result	Requirements
Loss on Ignition	%10.30	Max = 3
SiO ₂	%21.69	-
Al ₂ O ₃	%3.81	-
Fe ₂ O ₃	%4.26	-
CaO	%63.66	-
MgO	%2.10	Max = 5
SO ₃	%2.20	Max = 2.3
Cl	-	-
Insoluble Residue	%0.50	Max = 0.75
Free CaO	%1.00	-
Alkalies (a ₂ O+%0.658 K ₂ O%)	%0.90	-
C ₃ S	%56.4	-
C ₂ S	%19.7	-
C ₃ A	%2.9	Max = 5.0
C ₄ AF	%13.0	-

Mineralogical Composition	Factory test result	Standard	GOST 10178	Unit
C ₃ S	52.4			%
C ₂ S	20.4			%
C ₃ A	7.61	Max 8.00		%
C ₄ AF	11.1			%



Physical Tests		
Component	Result	Requirements
Fineness /Blaine	(cm ² /g) 3100	Min = 2800
Fineness /Residue On Sieve 90p	%1.8	-
Setting Time / Intial	Minute 150	Min = 45
Setting Time / Final	Hour 3	Max = 6
Compressive Strength /3Days	Kg/cm ² 240	Min = 86
Compressive Strength /7Days	Kg/cm ² 330	Min = 150
Compressive Strength /28Days	Kg/cm ² 450	Min = 270
Soundness / Autoclave Expansion	%0.10	Min = 0.8