REPORT NO. 12121			ULR NO.		
Issued To	:	hii	Date of Receipt	:	12-11-2025
			Date of start of analysis	:	12-11-2025
Letter REF. NO. & Date	:	45745475 & 2025-11-18	Date of completion of analysis	:	12-11-2025
Sample Description	:	Cement, OPC-43, Make- Ultratech	Date of issue	:	12-11-2025
Name of work	:	Avinash Kumar Jha			

S.No.	Tests	Test Methods	Requirements as per IS 269:2015 With Amendment No. 1	Results	Conformity
Discipline : Mechanical, Group : Buildings Materials					
Physical Requirements					
1.	Consistency, %	IS 4031(P-4):1988	-		
2.	Density, g/cc	IS 4031(P-11):1988	-		
3.	Fineness, m^2/ kg	IS 4031(P-2):1999	225 Min.		
4.	Initial Setting Time, Minutes	IS 4031(P-5):1988	30 Min.		
5.	Final Setting Time, Minutes	IS 4031(P-5):1988	600 Max.		
6.	Soundness By Le-Chatelier Method, mm	IS 4031(P-3):1988	10 Max.		
7.	Soundness By Autoclave Test Method, %	IS 4031(P-3):1988	0.8 Max.		
8.	Compressive Strength at 3 Days (72±1 Hours), MPa	IS:4031(P-6):1988	23 Min.		
9.	Compressive Strength at 7 Days (168±2 Hours), MPa	IS 4031(P-6):1988	33 Min.		
10.	Compressive Strength at 28 Days (672±4 Hours), MPa	IS 4031(P-6):1988	43 - 58		
Discipline : Chemical, Group : Building Material					
Chemical Requirements					
1.	Ratio of % of lime to % of SiO_2, Al_2O_3 & Fe_2O_3 as per formula $\frac{(CaO - 0.7SO_3)}{2.8SiO_2+1.2Al_2O_3+0.65 Fe_2O_3}$	IS 4032:1985	0.66 -1.02		

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2.	Ratio of % of Alumina to that of Iron oxide	IS 4032:1985	0.66 Min.		
3.	Insoluble Residue, % by mass	IS 4032:1985	5.0 Max.		
4.	Magnesia as MgO, % by mass	IS 4032:1985	6.0 Max.		
5.	Total Sulphur Content Calculated as Sulphuric Anhydride (SO_3), % by mass	IS 4032:1985	3.5 Max.		
6.	Loss on Ignition. % by mass	IS 4032:1985	5.0 Max.		
7.	Chloride Content, % by mass	IS 4032:1985	0.1 Max. 0.05 Max. (For Prestressed Structures)		
8.	Alkali Content expressed as Sodium Oxide ($Na_2O+0.658\ K_2O$), % by mass	IS 4032:1985	0.6 Max.		

Analyst