According to PS: 232-2008 (R) Grade 53

				Date	21. Sep. 2013
Chemical Composition	**PS: 232-2008 (R) Grade 53**				
		Results			**Standard Requirements maximum**
Silicon Dioxide	**SiO_2**	20.15	%		
Aluminium Trioxide	**Al_2O_3**	4.55	%		
Ferric Oxcide	**Fe_2O_3**	3.6	%		
Calcium Oxide	**CaO**	62.34	%		
Magnesium Oxcide	**MgO**	2.28	%		6% Max
Sulphate	**SO_3**	2.91	%		**3 % Max**
Potassium Oxcide	**K_2O**	0.73	%		
Sodium oxcide	**Na_2O**	0.04	%		
Chloride	**Cl**	0.038	%		
Insoluable Residue	**IR**	1.36	%		**3.0% Max**
Loss on Ignition	**LOI**	3.81	%		**4.0% Max**
Lime Saturation Factor	**LSF**	0.94			**0.8 Min, 1.02 Max**
Alumina Ratio	**AM**	1.26			**0.66 Min**
Tricalcium Aluminates	**C_3A**	5.97	%		
Tetracalcium Aluminoferrate	**C4AF**	10.94	%		
Alkalis Equivalent	**AE**	0.52	%		

Physical and Mechanical Properties	
Compressive Strength – Test method IS-4031 (Part 6)-1988	**Standard Requirements**

	Results	minimum
3 days	47.20	**27.0 Mpa**
7 days	55.80	**37.0 Mpa**
28 days	66.50	**53.0 Mpa**

Initial &Final Setting Time – Test method PS: 232-2008 (R)	**Results**	**Standard Requirements minimum**
Initial Time	195	**30 (mts) Min**
Final Time	265	**600 (mts) Max**

Standard Consistency,Finenes & Expansion – Test method PS: 232-2008 (R)	**Results**	**Standard Requirements minimum**
A. Lechatlier's Expansion	0.02	**10.0 mm**
B. Autoclave Expansion	0.01	**0.80%**
Fineness by Blaine m^2 /Kg Min.	338	**225 sq.m/Kg Min.**
Standard Consistency	26.10	

All the above chemical, mechanical and physical analysis comply with the above mentioned standard requirements.

Approved by

Optimization Department

Calculations:

C_3A= 2.65 Al_2O_3 - 1.692 Fe_2O_3

AE= Na_2O + 0.658 K_2O