



Doc.no.: WD/LAB/FM/08

**Wadi Cement Work  
Ordinary Portland Cement 53 grade**

**Week No. 03 (15.01.2017 to 21.01.2017)**

Sl.no.	Characteristics	Unit	Actual	IS 12269 :2013 specified requirement
<b>1</b>	<b>Chemical characteristics</b>			
	Magnesia (MgO)	%	0.9	Max. 6.0
	Sulphuric anhydride (SO <sub>3</sub> )	%	3.1	Max. 3.5
	Chloride (Cl-)	%	0.022	1. Max. 0.1 for structures other than prestressed concrete 2. Max. 0.05 for Prestressed concrete structures
	Insoluble Residue (IR)	%	0.6	Max. 5.0
	Loss on Ignition	%	1.7	Max. 4.0
	Lime Saturation Factor (LSF)		0.89	0.80 to 1.02
	Ratio of percentage of Alumina to that of Iron oxide		1.22	Min. 0.66
	Tri Calcium Aluminate (C <sub>3</sub> A)	%	6.23	-
<b>2</b>	<b>Physical characteristics</b>			
	Fineness (by Blaine method)	m <sup>2</sup> /kg	302	Min. 225
	<b>Soundness</b>			
	(a) Le chatelier method	mm	1.0	Max. 10
	(b) Autoclave test method	%	0.1	Max. 0.8
	<b>Setting time</b>			
	(a) Initial Setting Time (IST)	Minutes	125	Min. 30
	(b) Final Setting Time (FST)	Minutes	185	Max. 600
	<b>Compressive Strength</b>			
	(a) 3-days	MPa	38.1	27
	(b) 7-days	MPa	47.6	37
	(c) 28-days	MPa	Awaited	53
	Normal consistency	%	28.2	-
	Temperature during Testing	°C	27+/-2	27+/-2

**Head Quality Assurance**