JK LAKSHMI CEMENT LTD. CEMENT LTD. JAYKAYPURAM-307019 Dist. Sirohi. , Rajasthan TEST CERTIFICATE FOR JK LAKSHMI 43 – GRADE OPC LICENCE NO . CM/L-2361143 CT5708 WEEK No 35 ULR NO. TC-570818000000005F DATE OF ISSUE 01.10.2018 CHEMICAL / PHYSICAL REQUIREMENTS SPECIFICATION CLAUSE No. REQUIREMENT AS PER IS No. 269 – 2015 OBTAINED			
	CLITCHE IV.	AMENDMENT No. 6	
 CHEMICAL REQUIREMENTS : (i) Ratio of Percentage of Lime to percentage of silica, alumina and iron oxide CaO – 0.7SO₃ 	5 5.1	Not Greater than 1.02 And not less than 0.66	0.910
$2.8 \; SiO_2 + 1.2 \; Al_2O_3 + 0.65 \; Fe_2O_3$			
(ii) Ratio of percentage of alumina to that of iron oxide	5.1	Not less than 0.66	1.46
(iii) Insoluble residue, percent by mass	5.1	Not more than 5.0	2.69
(iv) Magnesia, percent by mass	5.1	Not more than 6.0	2.47
 v) Total sulphur calculated as Sulphuric Anhydride (SO₃), Percent by mass 	5.1	Not more than 3.5	2.55
(vi) Total loss on ignition	5.1	Not more than 5%	2.00
(vii) Chloride, percent by mass	5.1	Not more than 0.1	0.022
PHYSICAL REQUIREMENTS : NC	6	%	27.50
(i) FINENESS : SP. SURFACE	6.1	Not less than 225 m2/kg	280
(ii) SOUNDNESS :a) Le-chatelier method Expansion	6.2	Not more than 10 mm	1.00
b) Auto clave test expansion		Not more than 0.8%	0.065
(iii) SETTING TIMEa) Initial Setting time in Minutes	6.3	Not less than 30	140
b) Final setting time in Minutes		Not more than 600	180
(iv) COMPRESIVE STRENGTH 72 ± 1 Hours (3 Days)	6.4	Not less than 23 MPa	32.6
168 ± 2 Hours (7 Days)		Not less than 33 MPa	40.0
672 ± 4 Hours (28 Days)		Not less than 43 MPa * Not more than 58 MPa	50.0

REMARKS : The test results complies with the requirements of IS:269 – 2015 for 43 grade OPC for all Chemical Requirements and Physical requirements including Compressive Strength Up to 28- days. Test Protocol : IS:4032 and IS:4031.

Note : Results reported above are the average test results of all samples testing during relevant week.

CERTIFIED ISO 9001:2008 ISO 14001:2004 OHSAS 18001:2007

HOD (QC)

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