

**JSW Cement Limited**  
**TEST REPORT**

Portland Slag Cement as per IS 455:1989

REF.: JSW/QA/2014 38

DATE : 21-10-2016

WEEK NO. : 38

16-09-2016 to 22-09-2016

CHARACTERISTIC	RESULTS OBTAINED	REQUIREMENT OF IS455:1989
<b>(A) CHEMICAL COMPOSITION</b>		
(i) Magnesia (MgO), % by mass	4.55	10.0 Maximum
(ii) Insoluble Residue, % by mass	0.42	4.0 Maximum
(iii) Sulphuric Anhydride (SO <sub>3</sub> ) % by mass	2.67	3.0 Maximum
(iv) Sulphide Sulphur (S)	0.23	1.5 Maximum
(v) Loss on Ignition % by mass	1.13	5.0 Maximum
(vi) Total Chloride (Cl), % by mass	0.016	0.10 Maximum
<b>(B) PHYSICAL TESTING</b>		
<b>1. Fineness of Cement</b>		
Sp.Surface blaine (m <sup>2</sup> /kg)	368	225 m <sup>2</sup> /kg minimum
<b>2. Soundness</b>		
Le-Chatelier Expansion (mm)	0.54	10 mm Maximum
Autoclave Expansion (%)	0.06	0.8 % Maximum
<b>3. Setting Time</b>		
Initial (in Minutes)	171	Not less than 30 minutes
Final (in Minutes)	236	Not more than 600 minutes
<b>4. Compressive Strength (MPa)</b>		
(a) At 72 ± 1 Hrs.	26.21	16 MPa Minimum
(b) At 168 ± 2 Hrs.	37.02	22 MPa Minimum
(c) At 672 ± 4 Hrs.	52.00	33 MPa Minimum

**Remarks :**

- Temperature during testing - 27 ± 2° c.
- Portland Slag Cement conforms to the requirement of IS 455-1989 in all respects.



Associate Vice President