

## TEST CERTIFICATE

### JSW

### Ground Granulated Blast Furnace Slag

Sr. No.	Characteristic	Requirement as per BS:6699	Test Result
1	Fineness (M <sup>2</sup> /KG)	275 (Min.)	381.00
2	Residue		
	Residue by wet sieve on 45 $\mu$ (%)		3.80
3	Initial Setting Time (Min)	Not less than IST of OPC	185
4	Insoluble Residue (%)	1.5 (Max.)	0.21
5	Magnesia content (%)	14.0 (Max.)	8.09
6	Sulphide Sulphur (%)	2.00 (Max.)	0.53
7	Sulfate content (%) as SO <sub>3</sub>	2.50 (Max.)	0.21
8	Loss on Ignition (%)	3.00 (Max.)	0.41
9	Manganese content (%)	2.00 (Max.)	0.21
10	Chloride content (%)	0.10 (Max.)	0.001
11	Moisture content (%)	1.00 (Max.)	0.03
12	Glass content (%)	67 (Min.)	96.40
13	Compressive Strength (N/mm <sup>2</sup> )		
	After 7 days	12.0 (Min.)	20.47
	28 days	32.5 (Min.)	37.16
14	Chemical Moduli		
(A)	CaO + MgO + SiO <sub>2</sub>	66.66 (Min.)	78.12
(B)	CaO + MgO/SiO <sub>2</sub>	>1.0	1.26
(C)	CaO/SiO <sub>2</sub>	<1.40	1.03

**Note :There is No Indian Standard on GGBS. For reference BS specification is given.  
Granulated slag used for JSW Steel Ltd., GBS conforms to IS 12089:1987.**

*\* COMPRESSIVE STRENGTH , SOUNDNESS AND INITIAL SETTING TIME ON BLEND OF 70% GGBS : 30% OPC.*

Week No.:	39	Month:	9	Year:	2016
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Associate Vice President