

TEST CERTIFICATE

Ground Granulated Blast Furnace Slag

START STRONG . GROW STRONGER.

Sr. No.	Characteristic	Requirement as per IS 16714:2018	Test Result
1	Fineness (M ² /KG)	320 (Min.)	385
2	Specific Gravity		2.92
3	Residue by wet basis on 45μ (%)		4.92
4	Manganese oxide (MnO) %	5.50 (Max)	0.22
5	Magnesium oxide (MgO) %	17.00 (Max.)	7.89
6	Sulphide Sulphur (S) %	2.00 (Max.)	0.54
7	Sulfate (as SO ₃) %	3.00 (Max.)	0.18
8	Insoluble residue, %	3.00 (Max.)	0.21
9	Chloride content %	0.10 (Max.)	0.003
10	Loss on ignition, %	3.00 (Max.)	0.38
11	Moisture content %	1.00 (Max.)	0.011
12	Glass content %	85 (Min.)	97.65
13	Slag Activity Index (SAI) (%)		
(A)	7 days	Not less than 60 % of control OPC 43 Grade cement mortar cube	82.51
(B)	28 days	Not less than 75 % of control OPC 43 Grade cement mortar cube	UT
15	Chemical Moduli		
(A)	(CaO + MgO + 1/3Al ₂ O ₃) / SiO ₂ +2/3Al ₂ O ₃	1.00 (Min)	1.10
(B)	CaO + MgO + Al ₂ O ₃ / SiO ₂	1.00 (Min)	1.82
(C)	(CaO + MgO + 1/2MgO + Al ₂ O ₃) / SiO ₂ + MnO	1.50 (Min)	2.15

Note :

Slag activity index (SAI) shall be determined using blend of 50 % GGBS and 50 % control OPC 43 conforming to IS 269, having total alkalies (Na₂O+0.658 K₂O not less than 0.6 % and not more than 0.9 %). The blend shall be tested in accordance with IS 4031 (Part 6), for determining compressive strength of mortar.

SAI shall be determined as:
$$\frac{\text{Compressive strength of the mortar cube using blend}}{\text{Compressive strength of control OPC mortar cube}} \times 100$$

Week No.: 13 **Month:** 3 & 4 **Year:** 2019

Address:

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Associated General Manager