



# **WORK TEST CERTIFICATE**

## **43 Grade Ordinary Portland Cement**

Despatched during Week No.		08	From	19/02/2017	To	25/02/2017
Test Certificate No. Dated		08 06/03/2017	Reference No.		WD/LAB/TC/07	
S.N.	Parameters		Results Obtained	Requirement as per IS 269 : 2015 (Variety: OPC 43)		
1	Chemical Composition					
	Lime Saturation Factor CaO – 0.7 SO <sub>3</sub> / (2.8 SiO <sub>2</sub> + 1.2 Al <sub>2</sub> O <sub>3</sub> + 0.65 Fe <sub>2</sub> O <sub>3</sub> )		0.87	Not greater than 1.02 and not less than 0.66		
	Ratio of % Alumina to that of Iron Oxide Al <sub>2</sub> O <sub>3</sub> / Fe <sub>2</sub> O <sub>3</sub>		1.26	Not less than 0.66		
	Insoluble Residue (% by mass)		0.7	Not more than 5.0 %		
	Magnesia (% by mass)		0.9	Not more than 6.0 %		
	Sulphuric Anhydride (% by mass)		2.7	Not More than 3.5 %		
	Total loss on Ignition (%)		1.8	Not More than 5.0 %		
	Chloride Content (%)		0.021	Not more than 0.1 % for general purpose & not more than 0.05 % for pre-stressed structures		
	Physical Analysis					
2	Fineness					
	Blaine's Specific Surface Area (m <sup>2</sup> / kg)		293	Not Less than 225		
3	Compressive Strength (MPa)					
	72 ± 1h (3 Days)		33.2	Not less than 23.0		
	168 ± 2h (7 Days)		42.7	Not less than 33.0		
	672 ± 4h (28 Days) *		Awaited	Not less than 43.0 & not more than 58.0		
4	Setting Time (Minutes)					
	Initial		130	Not less than 30		
	Final		190	Not more than 600		
5	Soundness					
	Le-Chatelier Expansion (mm)		1.0	Not more than 10.0		
	Auto-Clave Expansion (%)		0.05	Not more than 0.8		
6	Normal Consistency (%)		27.5			
	Temp. During Testing (°C)		27	(27 ± 2) <sup>0</sup> C		

The above cement complies with the requirements of IS 269 : 2015 (Variety: OPC 43) for 43 Grade Ordinary Portland Cement

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*[Signature]*

Manager (QA)

Chief Manager Production