



# **WORK TEST CERTIFICATE**

## **53 Grade Ordinary Portland Cement**

Despatched during Week No.		34	From	20-Aug-2022	To	26-Aug-2022
Test Certificate No.		34	Reference No.		WCW/IMS/QA/FM/17	
Dated		3-Sep-2022				
S.N.	Parameters			Results Obtained	Requirement as per IS 269 : 2015 (Variety: OPC 53)	
1	Chemical Composition					
	Lime Saturation Factor ( CaO – 0.7 *SO3) / (2.8* SiO2 + 1.2* Al2O3 + 0.65* Fe2O3)			0.91	Not greater than 1.02 and not less than 0.80	
	Ratio of % Alumina to that of Iron Oxide Al2O3 / Fe2O3			1.22	Not less than 0.66	
	Insoluble Residue (% by mass)			0.94	Not more than 5.0 %	
	Magnesia (% by mass)			0.89	Not more than 6.0 %	
	Sulphuric Anhydride (% by mass)			2.91	Not More than 3.5 %	
	Total loss on Ignition (%)			1.95	Not More than 4.0 %	
	Chloride Content (%)			0.010	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 (m2 / kg)			319	Not Less than 225	
3	Compressive Strength (MPa)					
	72 ± 1h (3 Days)			37.4	Not less than 27.0	
	168 ± 2h (7 Days)			47.7	Not less than 37.0	
	672 ± 4h (28 Days) *			Awaited	Not less than 53.0	
4	Setting Time (Minutes)					
	Initial			120	Not less than 30	
	Final			175	Not more than 600	
5	Soundness					
	Le-Chatelier Expansion (mm)			1.00	Not more than 10.0	
	Auto-Clave Expansion (%)			0.060	Not more than 0.8	
6	Normal Consistency (%)			27.25		
	Temp. During Testing (0C)			27.00	(27 ± 2)0C	

The above cement complies with the requirements of IS 269 : 2015 (Variety: OPC 53) for 53 Grade Ordinary Portland Cement

Manager (QA)

DGM QC