





## **WORK TEST CERTIFICATE**

## **53 Grade Ordinary Portland Cement**

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Despatched during Week No.		27	From	1-Jul-2020		То	7-Jul-2020
Test Certificate No.		27	Referenc	e No.		WCW/IMS/QA/FM/08	
Dated		5-Aug-2020	Kelerenc				
S.N.	Pa	Parameters			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)			0.90	Not greater than 1.02 and not less than 0.80		
	Ratio of % Alumina to that of Iron Oxide Al2O3 / Fe2O3			1.25	Not less than 0.66		
	Insoluble Residue (% by mass)			0.50	Not more than 5.0 %		
	Magnesia (% by mass)			0.80	Not more than 6.0 %		
	Sulphuric Anhydride (% by mass)			2.80	Not More than 3.5 %		
	Total loss on Ignition (%)			1.50	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)			318	Not Less than 225		
3	Compressive Strength (MPa)						
	72 ± 1h (3 Days)			40.0	Not less than 27.0		
	168 ± 2h (7 Days)			49.0	Not less than 37.0		
	672 ± 4h (28 Days) *			62.0	Not less than 53.0		
4	Setting Time (Minutes)						
	Initial			170	Not less than 30		
	Final			220	Not more than 600		
5	Soundness						
	Le-Chatelier Expansion (mm)			1.00	Not more than 10.0		
	Auto-Clave Expansion (%)			0.070	Not more than 0.8		
6	Normal Consistency (%)			27.00			
	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

Granulated Slag (4%) & Limestone (1%) added as Performance Improver

Manager (QA)