



Duraton CEMENT

India's Most Advanced Cement

Vill. Rajgarh, Near Shambu Barrier, Rajpura, Punjab 140417

Despatched during Week No.	42	From	15/10/2018	To	21/10/2018
Test Certificate No./ Dated	33/ 5th Nov. 2018	Reference No.	AFCL/P&QC/TC/18/0033		
S.N.	Parameters	Results Obtained	Requirement as per IS 1489 (Part I):2015		
1	Chemical Composition (% by mass)				
	Loss on Ignition	2.7	Not More than 5.0		
	Magnesia (MgO)	1.4	Not More than 6.0		
	Sulphuric Anhydride (SO ₃)	2.5	Not More than 3.5		
	Chloride Content	0.01	Not More than 0.1 (for general purpose) & not more than 0.05 for pre-stressed structures		
	Insoluble Residue	26.5	Max. Insoluble Residue Not More than $[X + 4.0 (100-X) / 100]$, Min. Insoluble Residue Not less than $(0.6 X)$, Where "X" is the declared Pozzolana content in cement.		
2	Physical Analysis				
	Fineness (m²/kg)				
3	Blaine's Specific Surface Area	426	Not Less than 300		
	Compressive Strength (MPa)				
	72 ± 1h (3 Days)	27.6	Not less than 16.0		
	168 ± 2h (7 Days)	34.6	Not less than 22.0		
4	672 ± 4h (28 Days)*	51.5	Not less than 33.0		
	Setting Time (Minutes)				
	Initial	160	Not less than 30		
5	Final	205	Not more than 600		
	Soundness				
	Le-Chatelier Expansion (mm)	0.5	Not more than 10.0		
6	Auto-Clave Expansion (%)	0.19	Not more than 0.8		
	Drying Shrinkage (%)*	0.015	Not More than 0.15		
7	Normal Consistency (%)	31.5	-		
	Temp. During Testing (°C)	27.0	$(27 \pm 2)^{\circ}C$		

* Declared Pozzolana (Fly-Ash) Content in Cement is (%)	28.0
* Compressive Strength (in MPa) of 28 Days & Drying Shrinkage (in %) values are of Week No	39 & 38 respectively

The above cement complies with the requirements of IS 1489 (Part I): 2015 for Portland Pozzolana Cement.

K.S. Birdi

P&QC Manager

Plant Head