



Duraton CEMENT

India's Most Advanced Cement

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

Despatched during Week No.		43	From	22/10/2018	To	28/10/2018
Test Certificate No./ Dated		34/ 12 th Nov. 2018	Reference No.		AFCL/P&QC/TC/18/0034	
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	26.7	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.			
Physical Analysis						
2	Fineness (m²/kg)					
	Blaine's Specific Surface Area	423	Not Less than 300			
3	Compressive Strength (MPa)					
	72 ± 1h (3 Days)	27.3	Not less than 16.0			
	168 ± 2h (7 Days)	34.8	Not less than 22.0			
	672 ± 4h (28 Days)*	51.8	Not less than 33.0			
4	Setting Time (Minutes)					
	Initial	155	Not less than 30			
	Final	210	Not more than 600			
5	Soundness					
	Le-Chatelier Expansion (mm)	1.0	Not more than 10.0			
	Auto-Clave Expansion (%)	0.23	Not more than 0.8			
6	Drying Shrinkage (%)*	0.018	Not More than 0.15			
7	Normal Consistency (%)					
	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	40 & 39 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