



# Duraton CEMENT

India's Most Advanced Cement

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

Despatched during Week No.		52	From	24/12/2018	To	30/12/2018
Test Certificate No./ Dated		43/ 7 <sup>th</sup> Jan. 2019	Reference No.		AFCL/P&QC/TC/19/0043	
S.N.	Parameters	Results Obtained	Requirement as per IS 1489 (Part I):2015			
<b>Chemical Composition (% by mass)</b>						
1	Loss on Ignition	2.75	Not More than 5.0			
	Magnesia (MgO)	1.75	Not More than 6.0			
	Sulphuric Anhydride (SO <sub>3</sub> )	2.50	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	27.0	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.			
<b>Physical Analysis</b>						
2	<b>Fineness (m<sup>2</sup>/kg)</b>					
	Blaine's Specific Surface Area	420	Not Less than 300			
3	<b>Compressive Strength (MPa)</b>					
	72 ± 1h (3 Days)	26.0	Not less than 16.0			
	168 ± 2h (7 Days)	34.0	Not less than 22.0			
	672 ± 4h (28 Days)	51.0	Not less than 33.0			
4	<b>Setting Time (Minutes)</b>					
	Initial	155	Not less than 30			
	Final	210	Not more than 600			
5	<b>Soundness</b>					
	Le-Chatelier Expansion (mm)	1.5	Not more than 10.0			
	Auto-Clave Expansion (%)	0.24	Not more than 0.8			
6	Drying Shrinkage (%)	0.017	Not More than 0.15			
7	<b>Normal Consistency (%)</b>					
	Temp. During Testing (°C)	27.0	(27 ± 2) <sup>0</sup> 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	49 & 48 respectively

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

K.S. Birdi

*[Signature]*

**P&QC Manager**

**Plant Head**