

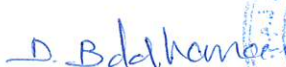
شهادة أسمنت بورتلاندي

PORTLAND CEMENT CERTIFICATE

Type of Cement : CEM-I 42.5 N أسمنت بورتلاندي س إم 1 42.5 ن
 Standard : BS EN 197-1:2011
 Week No. : 17/21
 Sample Date : 23-29.04.2021 تاريخ العينة :
 Date of Issue : 31-May-21

Parameters	Units	Results %	Specification	
Chemical Test Results				
Loss On Ignition	LOI	%	2.88	Max. 5.0 %
Silicon Dioxide	SiO ₂	%	20.10	
Aluminium Oxide	Al ₂ O ₃	%	4.89	
Ferric Oxide	Fe ₂ O ₃	%	3.51	
Calcium Oxide	CaO	%	63.02	
Magnesium Oxide	MgO	%	1.45	Max. 5.0 %
Potassium Oxide	K ₂ O	%	0.55	
Sodium Oxide	Na ₂ O	%	0.22	
Equivalent Alkali (Na ₂ O + 0.658* K ₂ O)		%	0.58	
Sulphur Trioxide	SO ₃	%	2.77	Max 3.5 %
Chloride	Cl ⁻	%	0.034	Max 0.10 %
Insoluble Residue	IR	%	0.35	Max. 5.0 %
Free Lime	Free CaO	%	1.46	
Cement Phases				
Tri Calcium Silicate	C ₃ S	%	52.08	
Di Calcium Silicate	C ₂ S	%	18.42	
Tri Calcium Aluminate	C ₃ A	%	7.03	
Tetra Calcium Alumino ferrate	C ₄ AF	%	10.68	
Physical Test Results				
Fineness (Specific Surface)	m ² /kg		331	
+45 µm Residue	%		10.34	
Specific Gravity			3.15	
Initial Setting Time (IST)	Minutes		188	Min. 60 minutes
Final Setting Time (FST)	Minutes		218	
Soundness -Le-Chatlier	mm		0.6	Max. 10 mm
Compressive Strength (N/mm²)				
2 Days	N/mm2		23.9	Min 10
7 Days	N/mm2		40.4	
28 Days	N/mm2		51.3	Min. 42.5 & Max. 62.5

We hereby certify that the above described PORTLAND CEMENT - CEM I 42.5 N, at the time of consignment, meets the chemical and Physical requirements of the BS EN 197-1:2011.


 Quality Control Manager
 (D. Balasubramanian)