

اسمنت معتدل لمقاومة الكبريت - نوع 2

Moderate Sulphate Resisting Cement (MSRC)

Type of Cement : Type II
 Standard : ASTM C-150-19
 Week No. : 17/21
 Sample Date : 23-29.04.2021 تاريخ العينة :
 Issue Date : 31-May-21

Parameters	Units	Results %	Specification	
Chemical Test Results				
Loss On Ignition	LOI	%	2.88	Max. 3.0 %
Silicon Dioxide	SiO ₂	%	20.10	
Aluminium Oxide	Al ₂ O ₃	%	4.89	Max. 6.0 %
Ferric Oxide	Fe ₂ O ₃	%	3.51	Max. 6.0 %
Calcium Oxide	CaO	%	63.02	
Magnesium Oxide	MgO	%	1.45	Max. 6.0 %
Equivalent Alkali (Na ₂ O+0.658K ₂ O)		%	0.58	Max. 0.60 %
Sulphur Trioxide	SO ₃	%	2.77	Max 3.0 %
Chloride	Cl ⁻	%	0.034	
Insoluble Residue	IR	%	0.35	Max. 1.50 %
Free Lime	Free CaO	%	1.46	
Cement Phases				
Tri Calcium Silicate	C ₃ S	%	52.08	
Tri Calcium Aluminate	C ₃ A	%	7.03	Max. 8.0 %
C ₃ S+4.75C ₃ A		%	85.46	
Physical Test Results				
Fineness (Specific Surface)	Blaines	m ² /kg	331.0	Min. 260 m ² /kg
+45 µm Residue		%	10.34	
Specific Gravity			3.15	
Initial Setting Time	IST	Minutes	170	Min. 45 minutes
Final Setting Time	FST	Minutes	190	Max. 375 minutes
Soundness -Autoclave	Expansion	%	0.08	Max. 0.80 %
Air Content		%	2.2	Max. 12.0 %
False Setting		%	90.8	Min. 50.0 %
Heat of Hydration (KJ/kg)				
3 Days		KJ/kg	272.0	
7 Days		KJ/kg	311.0	
Compressive Strength (MPa)				
3 Days		MPa	24.2	Min. 10.0
7 Days		MPa	30.3	Min.17.0
28 Days		MPa	37.0	Min.28.0

We hereby certify that the above described PORTLAND CEMENT ,TYPE-II, at the time of consignment, meets the chemical and Physical requirements of ASTM C-150-19a.

D. Balasubramanian
 Quality Control Manager
 (D. Balasubramanian)

