



FARS & KHUZESTAN CEMENT HOLDING

F08/6

BOJNOURD CEMENT CO.

QUALITY CONTROL & LABORATORY DEPARTMENT



Passport of Quality

Product	Portland Cement Type 1 C 32,5 (M300) Normal Strength, MSR (Moderate Sulfate Resisting)
Standard of Sample	INSO 389, ASTM C150-2020, GOST 10178-85, GOST 30515-2013, GOST 31108-2016
Date of Report	July 2024

Chemical Analysis	Result	Standard Limitation INSO 389	Standard Limitation ASTM C150	Standard Limitation GOST 10178-85	Physical Analysis	Result	Standard Limitation ISIRI 389	Standard Limitation ASTM C150	Standard Limitation GOST 10178-85
SiO ₂ (%)	20.77	*	*	*	Specific Gravity (ton/m ³)	3.185	*	*	*
Al ₂ O ₃ (%)	4.14	*	*	*	Normal Consistency (%)	23.5	*	*	*
Fe ₂ O ₃ (%)	3.29	*	*	*	Setting Time Vicat test	160	Min 45	Min 45	Min 45
CaO (%)	64.14	*	*	*		03:00	Max 6:00	Max 6:15	Max 10:00
MgO (%)	2.03	Max 6.0	Max 6.0	Max 5	Soundness Expansion				
Na ₂ O (%)	0.33	*	*	*	Autoclave expansion (%)	0.03	Max 0.8	Max 0.8	*
K ₂ O (%)	0.68	*	*	*	Le Chatelier expansion (mm)	1	*	*	*
SO ₃ (%)	2.57	Max 3.00	Max 3.0	Max 3.5	Sulfate Resistance 14 days exp.(%)	0.034	*	*	*
Insoluble Residue (%)	0.69	Max 1.50	Max 0.75	*	Fineness				
Loss on Ignition (%)	2.57	Max 3.00	Max 3.0	*	Specific Surface, Blaine (cm ² /g)	3470	Min 2800	Min 2800	Min 2800
Free Lime (F.CaO) (%)	1.5	*	*	*	Retained on 45 μ Sieve (%)	12.4	*	*	*
Chloride (%)	0.020	*	*	*	Strength Results, Compressive Strength (kg/cm ²)				
Equivalent Alkalies (%) (0.658*K ₂ O+Na ₂ O), Optional	0.78	Max 0.60	Max 0.60	Max 1.20	1 Day	*	*	*	*
Lime Saturation Factor (LSF)	95.66	*	*	*	2 Days	232	*	*	*
Minerological Composition (Bouge Relations)					3 Days	*	Min 120	*	*
					7 Days	351	Min 200	*	*
					28 Days	456	Min 325 Max 525	*	Min 400
C3S, Tricalcium Silicate (%)	63.45	*	*	*	Heat of Hydration (cal/g), Optional				
C2S, Dicalcium Silicate (%)	11.70	*	*	*	7 Days	67.61	*	*	*
C3A, Tricalcium Aluminate (%)	5.39	*	*	*	28 Days	83.01	*	*	*
2C3A + C4AF	20.79	*	*	*					

Remarks :

Quality Control and Laboratory Management



Plant Management

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