



BOJNOURD CEMENT CO.

QUALITY CONTROL & LABORATORY DEPARTMENT



FARS & KHUZESTAN CEMENT HOLDING

F08/6

Passport of Quality

Product	Portland Cement Type 1 C 42,5 (M400) High 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	Standard	Standard	Physical Analysis	Result	Standard	Standard	Standard
		Limitation	Limitation	Limitation			Limitation	Limitation	Limitation
		ISIRI 389	ASTM C150	GOST 10178-85			ISIRI 389	ASTM C150	GOST 10178-85
SiO ₂ (%)	21.34	*	*	*	Specific Gravity (ton/m ³)	3.185	*	*	*
Al ₂ O ₃ (%)	4.21	*	*	*	Normal Consistency (%)	24.0	*	*	*
Fe ₂ O ₃ (%)	3.19	*	*	*	Setting Time Vicat test	Initial	150	Min 45	Min 45
CaO (%)	64.05	*	*	*		Final	02:50	Max 6:00	Max 6:15
MgO (%)	2.07	Max 5	Max 6.0	Max 5	Soundness Expansion				
Na ₂ O (%)	0.35	*	*	*	Autoclave expansion (%)	0.03	Max 0.8	Max 0.80	*
K ₂ O (%)	0.71	*	*	*	Le Chatelier expansion (mm)	1	*	*	*
SO ₃ (%)	2.58	Max 3.00	Max 3.0	Max 3.5	Sulfate Resistance 14 days exp.(%)	0.04	*	*	*
Insoluble Residue (%)					Fineness				
Loss on Ignition (%)					Specific Surface, Blaine (cm ² /g)	3400	Min 2800	Min 2800	Min 2800
Free Lime (F.CaO) (%)					Retained on 45 μ Sieve (%)	11.7	*	*	80 μ Max 15
Chloride (%)					Strength Results, Compressive Strength (kg/cm ²)				
Equivalent Alkalies (%) (0.658*K ₂ O+Na ₂ O), Optional					1 Day	*	*	*	*
Lime Saturation Factor (LSF)					2 Days	237	Min 100	*	*
Minerological Composition (Bouge Relations)					3 Days	*	*	*	*
					7 Days	366	*	*	*
					28 Days	471	Min 425 Max 625	*	Min 400
C3S , Tricalcium Silicate (%)	58.38	*	*	*	Heat of Hydration (cal/g), Optional				
C2S , Dicalcium Silicate (%)	17.15	*	*	*	7 Days	67.61	*	*	*
C3A ,Tricalcium Aluminate (%)	5.76	*	*	Max 8	28 Days	83.01	*	*	*
2C3A + C4AF	21.23	*	*	*					

Remarks :

Quality Control and Laboratory Management

Lotfi



Plant Management

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