

**Analysis:**

Portland cement type 1:

Portland Cement Type 1-325

**QUALITY CERTIFICATE**

Product	Portland Cement Type 1-325 ( M 400)
Standard	ISIRI 389,EN197 -1,GOST 10178
Ship	
Date	

Physical Properties	Factory test result	Standard (ISIRI - 389)	GOST 10178	Unit
Setting Time (Vicat ,Initial)	170	Min 45	Min 45	Minute
Setting Time (Vicat ,Final)	3.5	Max 6:00	Max 10:00	hr
Expansion (Autoclave)	0.1	Max 0.8	-	%
Specific Surface Area (Blaine)	3250	Min 2800	Min 2800	cm2/gr
Residue on 90m Sieve	1			%
Compressive Strength (1 day)				kg/cm2
Compressive Strength (2 days)				kg/cm2
Compressive Strength (3 days)	270	Min 120		kg/cm2
Compressive Strength (7 days)	370	Min 200		kg/cm2
Compressive Strength (28 days)	480	Min 325Max525	Min400	kg/cm2

Chemical Analysis	Factory test result	Standard (ISIRI - 389)	GOST 10178	Unit
SiO <sub>2</sub>	21.18	...		%
Al <sub>2</sub> O <sub>3</sub>	5.24	...		%
Fe <sub>2</sub> O <sub>3</sub>	3.55	...		%
CaO	63.56	...		%
MgO	1.79	Max 5.00	Max 5.00	%
SO <sub>3</sub>	2.33	Max 3.00	Max 3.50	%
Insoluble Residue	0.42	Max 0.75		%
Loss On Ignation	1.30	Max 3.00		%
Free CaO	1.4			%
K <sub>2</sub> O	0.5			%
Na <sub>2</sub> O	0.35			%

Modulus	Factory test result	Standard ( ISIRI - 389)	GOST 10178	Unit
Lime Saturation Factor (LSF)	91.35			%
Silica Modulus (SM)	2.41			
Alomina Modulus (AM)	1.48			

Mineralogical Composition	Factory test result	Standard ( ISIRI - 389)	GOST 10178	Unit
C <sub>3</sub> S	50.92			%
C <sub>2</sub> S	22.59			%
C <sub>3</sub> A	7.89			%
C <sub>4</sub> AF	10.79			%