



GCC Rio Grande

Manufacturing Plant:
Samalayuca, Chih., Mex.

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CEMENT MILL TEST REPORT

Report No.:	180930
Date produced:	09/ 1-30 /2018
Test date	09/ 1-30 /2018
Mfg. Plant:	SAMALAYUCA
Cement Type:	I-II Low Alkalie
Shipping No.:	180930

STANDARD CHEMICAL REQUIREMENTS	SPECIFICATIONS ASTM	II	TEST RESULTS
Silicon Dioxide (SiO ₂) - Percent			19.7
Aluminum Oxide (Al ₂ O ₃) - Percent	Maximum >	6.0	4.99
Ferric Oxide (Fe ₂ O ₃) - Percent	Maximum >	6.0	3.32
Calcium Oxide (CaO) - Percent		*	63.9
Magnesium Oxide (MgO) - Percent	Maximum >	6.0	1.8
Sulfur Trioxide (SO ₃) - Percent	Maximum >	3.0	2.70
Loss on Ignition - Percent	Maximum >	3.5	2.71
Insoluble Residue - Percent	Maximum >	1.50	0.49
Carbon dioxide (CO ₂) - Percent			1.76
Limestone content --Percent			4.24
Corrected Limestone -Percent			3.88
CaCO ₃ in Limestone - Percent	Minimum >	70.0	94.0
Tricalcium Silicate (C ₃ S) - Percent		*	56
Dicalcium Silicate (C ₂ S) - Percent		*	17
Tricalcium Aluminate (C ₃ A) - Percent	Maximum >	8.0	7.6
Tetracalcium Aluminoferrite (C ₄ AF) - Percent		*	10
C ₄ AF + 2 (C ₃ A) or C ₄ AF + C ₂ F - Percent		*	25
Alkalies (Sodium Oxide Equivalent) - Percent *	Maximum >	0.60	0.54
STANDARD PHYSICAL REQUIREMENTS			
Specific Surface , Blaine ,m ² /kg	Minimum >	260	395
- 325 Mesh - Percent		*	94.6
Compressive Strengths,psi (MPa)(C 109 cubes)			
psi (MPa)		psi (Mpa)	
1 DAY		*	2185 (15.0)
3 DAYS	Minimum >	1500 (10.0)	3780 (26.0)
7 DAYS	Minimum >	2500 (17.0)	4510 (31.1)
28 DAYS	Minimum >	*	5705 (39.3)
Time of Setting (Vicat)			
Initial ,minutes	Minimum >	45	124
Final ,minutes	Maximum >	375	266
False Set - Percent *	Minimum >	50	78
Air Content of Mortar - Percent	Maximum >	12	7.7
Autoclave Expansion - Percent	Maximum >	0.80	0.02
Mortar Bar Expansion (ASTM C -1038) Only for T-V - Percent	Maximum >	0.020	

*Optional (Sodium Oxide Equivalent) MIN. 0.53 MAX 0.59

Samples will be retained by 3 months.

RIO GRANDE PORTLAND CEMENT IS WARRANTED TO CONFORM AT THE TIME OF SHIPMENT WITH ASTM C -150 NO OTHER WARRANTY IS MADE OR IMPLIED. HAVING NO CONTROL OVER THE USE OF IT'S CEMENTS , RIO GRANDE PORTLAND DOES NOT GUARANTEE FINISHED WORK.

p.a.

SAMALAYUCA PLANT - TECHNICAL MANAGER