



GCC Rio Grande

Manufacturing Plant:
Samalayuca, Chih., Mex.

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CEMENT MILL TEST REPORT

Car Numbers:	Report No.:	170930
	Date Shipped:	9 / 1-30 /2017
	Test date	9 / 1-30 /2017
	Mfg. Plant:	SAMALAYUCA
	Cement Type:	I-II Low Alkalie
	Quantity:	Trucks
	Shipping No.:	170930

STANDARD CHEMICAL REQUIREMENTS	SPECIFICATIONS ASTM	II	TEST RESULTS
Silicon Dioxide (SiO ₂) - Percent			20.2
Aluminum Oxide (Al ₂ O ₃) - Percent	Maximum >	6.0	4.82
Ferric Oxide (Fe ₂ O ₃) - Percent	Maximum >	6.0	3.12
Calcium Oxide (CaO) - Percent		*	63.9
Magnesium Oxide (MgO) - Percent	Maximum >	6.0	2.1
Sulfur Trioxide (SO ₃) - Percent	Maximum >	3.0	2.69
Loss on Ignition - Percent	Maximum >	3.5	2.61
Insoluble Residue - Percent	Maximum >	1.50	0.55
Carbon dioxide (CO ₂) - Percent			1.86
Limestone content --Percent			4.49
Corrected Limestone -Percent			3.64
CaCO ₃ in Limestone - Percent	Minimum >	70.0	94.0
Tricalcium Silicate (C ₃ S) - Percent		*	52
Dicalcium Silicate (C ₂ S) - Percent		*	18
Tricalcium Aluminate (C ₃ A) - Percent	Maximum >	8.0	7
Tetracalcium Aluminoferrite (C ₄ AF) - Percent		*	10
C ₄ AF + 2 (C ₃ A) or C ₄ AF + C ₂ F - Percent		*	24
Alkalies (Sodium Oxide Equivalent) - Percent *	Maximum >	0.60	0.55

STANDARD PHYSICAL REQUIREMENTS			
Specific Surface , Blaine ,m ² /kg	Minimum >	280	360
- 325 Mesh - Percent		*	94.0
Compressive Strengths,psi (MPa)(C 109 cubes)			
psi (MPa)		psi (Mpa)	
1 DAY		*	1930 (13.3)
3 DAYS	Minimum >	1500 (10.0)	3430 (23.6)
7 DAYS	Minimum >	2500 (17.0)	4075 (28.1)
28 DAYS	Minimum >	*	5565 (38.3)
Time of Setting (Vicat)			
Initial ,minutes	Minimum >	45	130
Final ,minutes	Maximum >	375	275
False Set - Percent *	Minimum >	50	82
Air Content of Mortar - Percent	Maximum >	12	7.0
Autoclave Expansion - Percent	Maximum >	0.80	0.03
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