



TEXAS-LEHIGH CEMENT COMPANY



Evaluation tests for:

TLC API Class A Well Cement - Buda, Texas Plant

Typical Performance Data: Grind # 190201 Prod date: 1 - 28 February, 2019 Silo No. 14

Chemical Analysis(%) (ASTM C114)

<u>SiO2</u>	<u>Al2O3</u>	<u>Fe2O3</u>	<u>CaO</u>	<u>MgO</u>	<u>SO3</u>	<u>LOI</u>	<u>Na2O</u>	<u>K2O</u>	<u>Na2O Equiv.</u>	<u>Insol. Residue</u>	
20.2	5.4	1.9	64.8	1.2	3.4	3.0	0.2	0.9	0.8	0.63	
API Spec., max., %				6.0	3.5	3.0					0.75

Calculated Compounds(%) (API Spec. 10A, Table 1)

<u>C3S</u>	<u>C2S</u>	<u>C3A</u>	<u>C4AF</u>
62	11	11	6

Physical Parameters

Fineness

Blaine-m2/kg (ASTM C204) 292 API Spec.--280 min.
M-325(% Passing) (ASTM C430) 74.0

Thickening Time and Compressive Strength(46% H2O - neat slurry)

API Schedule	Depth ft.	Bottom Hole Circulation Temp	H2O	Compressive Strength		
4-Csg	6000	113 Deg F	5.19 gal/sk	8 hr/24hr - atmos. press. PSI		
Consistency Bc				Thickening Time		
Initial	15 Min.	30 Min	60 Min	70 Bc	100 Bc	
				100 °F (8 hr) 100 °F (24 hr)		
5	7	9	21	86	97	
API Spec.				30 Bc max. in 15-30 min. stirring period	90 minutes min.	250 PSI min. 1800 PSI min.

The above Class A cement meets all API specifications for API Class A (O)

All well cement tests are performed according to API Spec. 10A

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