



TEXAS-LEHIGH CEMENT COMPANY



Evaluation tests for:
TLC API Class A Well Cement - Buda, Texas Plant

Typical Performance Data: Grind # 220819 -- A Prod date: 1-31 August 2022 Silo No. 12.9

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>	
20.5	5.6	2.2	64.9	1.3	3.4	2.0	0.2	0.9	0.8	0.52	
API 10A Spec., max.,				6.0	3.5	3.5					1.5

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

<u>C3S</u>	<u>C2S</u>	<u>C3A</u>	<u>C4AF</u>
59	15	11	7

Physical Parameters

Fineness

Blaine-m2/kg (ASTM C204) 339 API 10A Spec. -- 280 min.
M-325(% Passing) (ASTM C430) 73.7

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

API Schedule 4-Csg Depth ft. 6000 Bottom Hole Circulation Temp 113 Deg F H2O 5.19 gal/sk

<u>Consistency Bc</u>				<u>Thickening Time</u>		<u>Compressive Strength 8 hr/24hr - atmos. press. PSI</u>	
<u>Initial</u>	<u>15 Min.</u>	<u>30 Min</u>	<u>60 Min</u>	<u>70 Bc</u>	<u>100 Bc</u>	<u>100 °F (8 hr)</u>	<u>100 °F (24 hr)</u>
7	9	10	25	99	117	1390	3490

API Spec. 30 Bc max. >= 90 min 250 PSI min. 1800 PSI min.
 in 15-30 min.
 stirring period

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

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

QC Manager

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