



Central Plains Cement Company

Cement Mill Test Report

Month of Issue: September 2018

Plant:	Tulsa, OK
Product:	Portland Cement Type V
Silos:	5,A
Manufactured:	August 2018

ASTM C 150-16 and AASHTO M 85-16 Standard Requirements

CHEMICAL ANALYSIS			PHYSICAL ANALYSIS		
Item	Spec limit	Test Result	Item	Spec limit	Test Result
Rapid Method, X-Ray (C 114)			Air content of mortar (%) (C 185)	12 max	7
SiO ₂ (%)	---	20.6	Blaine Fineness (m ² /kg) (C 204)	260 min	459
Al ₂ O ₃ (%)	---	3.7	-325 (%) (C 430)	---	93.3
Fe ₂ O ₃ (%)	---	4.7	Autoclave expansion (%) (C 151)	-0.2 min 0.80 max	0.01
CaO (%)	---	62.3	Compressive strength (PSI) (C 109)		
MgO (%)	6.0 max	1.9	1 day	---	2020
SO ₃ (%)	2.3 max*	3.0	3 days	1160 min	3060
Loss on ignition (%)	3.0 max	1.5	7 days	2180 min	3810
Insoluble residue (%)	0.75 max	0.47	28 days (Reflects previous month's data)	3050 min	5630
CO ₂ (%)	---	0.3	Time of setting (minutes)		
Limestone (%)	5.0 max	---	Vicat Initial (C 191)	45 - 375	125
CaCO ₃ in Limestone (%)	70 min	---			
Inorganic Process Addition	5.0 max	---			
Adjusted Potential Phase Composition (C 150)					
C ₃ S (%)	---	56			
C ₂ S (%)	---	17			
C ₃ A (%)	5 max	2			
C ₄ AF (%)	---	14			
C ₄ AF+2*C ₃ A (%)	25 max	18			

ASTM C 150-16 and AASHTO M 85-16 Optional Chemical Requirements:

NaEq (%)	---	0.47
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* Cement with SO₃ > 2.3 complies with ASTM C1038-10

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of ASTM C 150-16 & AASHTO M 85-16 STANDARD SPECIFICATIONS FOR TYPE V CEMENT.

Certified By:

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September 12, 2018