



Central Plains Cement Company

Cement Mill Test Report

Month of Issue: Feb-18

Plant: Sugar Creek Plant
 Product: Portland Cement Type III
 Shipped: Jan-18
 Manufactured: Nov-17

The current version of ASTM C 150 and AASHTO M 85 Standard Requirements

CHEMICAL ANALYSIS

Item	Spec limit	Test Result
Rapid Method, X-Ray (C 114)		
SiO2 (%)	---	20.5
Al2O3 (%)	---	4.7
Fe2O3 (%)	---	3.1
CaO (%)	---	64.1
MgO (%)	6.0 max	1.0
SO3 (%) *	3.5 max	4.3
Loss on ignition (%)	3.0 max	1.3
Insoluble residue (%)	1.5 max	0.43
Adjusted Potential Phase Composition (C 150)		
C3S (%)	---	57
C2S (%)	---	15
C3A (%)	15 max	7
C4AF (%)	---	9

PHYSICAL ANALYSIS

Item	Spec limit	Test Result
Air content of mortar (%) (C 185)	12 max	8
Blaine Fineness (m2/kg) (C 204)	---	589
-325 (%) (C 430)	---	99.0
Autoclave expansion (%) (C 151)	0.80 max	-0.02
Compressive strength (PSI) (C 109)		
1 day	1740 min	3950
3 days	3480 min	5240
28 days	---	7740
Time of setting (minutes)		
Vicat Initial (C 191)	45 - 375	61
Specific Gravity (C188)	---	3.15
False Set (%) (C 451)	50 min	77
Mortar Bar Expansion (%) (C 1038)*	0.020 max	0.003

ASTM C 150-09 and AASHTO M 85-09 Optional Chemical Requirements:

NaEq (%) 0.60 max 0.53

* May exceed 3.5% SO3 maximum based on our C 1038 results of <0.020% expansion at 14 days.

We certify that the above described cement meets the chemical and physical requirements of Type III for the current version of ASTM C 150 & AASHTO M 85 STANDARD.

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Certified By:

Paul Engel - Quality Coordinator

2/7/2018