



# Central Plains Cement Company

## Cement Mill Test Report

Month of Issue: April-17

Plant: Sugar Creek Plant  
 Product: Portland Cement Type I-II (MH)  
 Shipped: Mar-17  
 Manufactured: Mar-17

The current version of ASTM C 150 and AASHTO M 85 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)		
SiO2 (%)	---	20.2		12 max	8
Al2O3 (%)	6.0 max	4.7	Blaine Fineness (m2/kg) (C 204)		
Fe2O3 (%)	6.0 max	3.1		260 - 430	361
CaO (%)	---	64.0	-325 (%) (C 430)		
MgO (%)	6.0 max	1.2		---	95.8
SO3 (%)	3.0 max *	3.0	Autoclave expansion (%) (C 151)		
Loss on ignition (%)	3.5 max	2.6		0.80 max	-0.01
Insoluble residue (%)	1.5 max	0.27	Compressive strength (PSI) (C 109)		
CO2 (%)	---	1.8		---	2140
Limestone (%)	5.0 max	4.5		1740 min	3800
CaCO3 in Limestone (%)	70 min	93		2760 min	5060
Adjusted Potential Phase Composition (C 150)				---	7050
C3S (%)	---	55	28 days (Reflects previous month's data)		
C2S (%)	---	17	Time of setting (minutes)		
C3A (%)	8 max	7		45 - 375	97
C4AF (%)	---	9	Vicat Initial (C 191)		
C3S+4.75*C3A (%)	100 max	90		0.020 max	0.005
			Mortar Bar Expansion (%) (C 1038)*		
				---	3.15
			Specific Gravity (C188)		

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

NaEq (%) 0.60 max 0.55

\* May exceed 3.0% SO3 maximum based on our C 1038 results of <0.02% expansion at 14 days.

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

Sugar Creek Plant  
 2200 N Courtney Rd.  
 Sugar Creek, MO 64050  
 816-257-3608

Certified By:

Paul Engel - Quality Coordinator

4/7/2017



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### Base Cement Phase Composition

<u>Item</u>	<u>Test Result</u>
C3S (%)	58
C2S (%)	17
C3A (%)	8
C4AF (%)	10

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