



# Central Plains Cement Company

## Cement Mill Test Report

Month of Issue: June-17

Plant: Sugar Creek Plant  
 Product: Portland Cement Type I-II (MH)  
 Shipped: May-17  
 Manufactured: May-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
<b>Rapid Method, X-Ray (C 114)</b>			<b>Air content of mortar (%) (C 185)</b>		
SiO2 (%)	---	20.3		12 max	8
Al2O3 (%)	6.0 max	4.7	<b>Blaine Fineness (m2/kg) (C 204)</b>		
Fe2O3 (%)	6.0 max	3.1		260 - 430	358
CaO (%)	---	63.8	<b>-325 (%) (C 430)</b>		
MgO (%)	6.0 max	1.3		---	95.9
SO3 (%)	3.0 max *	3.0	<b>Autoclave expansion (%) (C 151)</b>		
Loss on ignition (%)	3.5 max	2.6		0.80 max	0.00
Insoluble residue (%)	1.5 max	0.51	<b>Compressive strength (PSI) (C 109)</b>		
CO2 (%)	---	1.7		---	2100
Limestone (%)	5.0 max	4.3	1 day		3820
CaCO3 in Limestone (%)	70 min	92	3 days	1740 min	5050
<b>Adjusted Potential Phase Composition (C 150)</b>			7 days	2760 min	6890
C3S (%)	---	53	28 days (Reflects previous month's data)	---	6890
C2S (%)	---	18	<b>Time of setting (minutes)</b>		
C3A (%)	8 max	7		45 - 375	99
C4AF (%)	---	9	<b>Vicat Initial (C 191)</b>		
C3S+4.75*C3A (%)	100 max	88		0.020 max	0.005
			<b>Mortar Bar Expansion (%) (C 1038)*</b>		
			<b>Specific Gravity (C188)</b>		
				---	3.15

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

NaEq (%) 0.60 max 0.56

\* 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

6/9/2017



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### Base Cement Phase Composition

<u>Item</u>	<u>Test Result</u>
C3S (%)	56
C2S (%)	19
C3A (%)	8
C4AF (%)	10

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