



# Cement Mill Test Report

Month of Issue: August 2022

Plant: Newberry Plant, Fl.  
 Product: Portland Cement Type I  
 Silo: 1  
 Manufactured: July 2022

## ASTM C150 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 (C114)</b>			<b>Air content of mortar (%) (C185)</b>		
SiO <sub>2</sub> (%)	---	19.6		12 max	8.3
Al <sub>2</sub> O <sub>3</sub> (%)	6.0 max	4.9	<b>Blaine Fineness (m<sup>2</sup>/kg) (C204)</b>		
Fe <sub>2</sub> O <sub>3</sub> (%)	6.0 max	3.4		260 min	384
CaO (%)	---	64.0	<b>-325 (%) (C430)</b>		
MgO (%)	6.0 max	1.1		---	96.3
SO <sub>3</sub> (%)	3.0 max *	2.6	<b>Density of Cement (g/cm<sup>3</sup>) (C188)***</b>		
Loss on ignition (%)	3.5 max	2.4		---	3.15
Insoluble residue (%)	1.5 max	0.5	<b>Compressive strength (MPa, [PSI]) (C109)</b>		
Na <sub>2</sub> O <sub>Eq</sub> (%)	--- §	0.45	1 day	---	15.0 [2180]
CO <sub>2</sub> (%)	---	1.5	3 days	12.0 [1740] min	25.6 [3720]
Limestone (%)	5.0 max	1.4	7 days	19.0 [2760] min	33.3 [4830]
CaCO <sub>3</sub> in Limestone (%)	70 min	93	28 days (Reflects previous month's data)	---	43.3 [6280]
Inorganic Process Addition (Baghouse Dust)	5 max	3.1	<b>Time of setting (minutes)</b>		
<b>Adjusted Potential Phase Composition (C150)</b>			Vicat Initial (C191)	45 - 375	110
C <sub>3</sub> S (%)	---	60	<b>Heat of Hydration (KJ/Kg, [cal/g]) (C1702)</b>		
C <sub>2</sub> S (%)	---	10	3 days (for information only)**	---	285 [68]
C <sub>3</sub> A (%)	---	7	<b>Mortar Bar Expansion (%) (C1038)**</b>		
C <sub>4</sub> AF (%)	---	10		0.020 max	0.007

\* May exceed 3.0% SO<sub>3</sub> maximum based on our C1038 results of <0.02% expansion at 14 days.

\*\* Current Production run not available - most recent provided

\*\*\* Average of 12 month data

§ Please refer to ASTM C1778 for guidance on reducing the risk of alkali aggregate reaction in concrete

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of applicable FDOT Section 921, ADOT, SCDOT, NCDOT, GDOT Specifications for Type I and Type II(MH) and VDOT Specifications for Type I; ASTM C150 & AASHTO M 85 STANDARD SPECIFICATIONS FOR TYPE I AND TYPE II(MH) CEMENT;

Certified By:

*Glen Farrar*

Glen Farrar - Quality Manager

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