



Cement Mill Test Report

Month of Issue: Jun 2022

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

ASTM C150 and AASHTO M 85 Standard Requirements

CHEMICAL ANALYSIS			PHYSICAL ANALYSIS		
Item	Spec limit	Test Result	Item	Spec limit	Test Result
Rapid Method, X-Ray (C114)			Air content of mortar (%) (C185)	12 max	8.2
SiO ₂ (%)	---	19.9	Blaine Fineness (m ² /kg) (C204)	260 min	380
Al ₂ O ₃ (%)	6.0 max	4.8	-325 (%) (C430)	---	96.4
Fe ₂ O ₃ (%)	6.0 max	3.4	Autoclave expansion (%) (C151)	0.80 max	0.05
CaO (%)	---	63.7	Density of Cement (g/cm ³) (C188)***	---	3.16
MgO (%)	6.0 max	1.3	Compressive strength (MPa, [PSI]) (C109)		
SO ₃ (%)	3.0 max *	2.7	1 day	---	14.5 [2110]
Loss on ignition (%)	3.5 max	2.2	3 days	12.0 [1740] min	25.0 [3620]
Insoluble residue (%)	1.5 max	0.7	7 days	19.0 [2760] min	32.5 [4720]
Na ₂ O _{Eq} (%)	--- §	0.46	28 days (Reflects previous month's data)	---	44.3 [6420]
CO ₂ (%)	---	1.3	Time of setting (minutes)		
Limestone (%)	5.0 max	1.0	Vicat Initial (C191)	45 - 375	125
CaCO ₃ in Limestone (%)	70 min	94	Heat of Hydration (KJ/Kg, [cal/g]) (C1702)		
Inorganic Process Addition (Baghouse Dust)	5 max	2.5	3 days (for information only)**	---	285 [68]
Adjusted Potential Phase Composition (C150)			Mortar Bar Expansion (%) (C1038)**	0.020 max	0.007
C ₃ S (%)	---	55			
C ₂ S (%)	---	15			
C ₃ A (%)	---	7			
C ₄ AF (%)	---	10			

* May exceed 3.0% SO₃ 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:

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