



Cement Mill Test Report

Month of Issue: November 2023

Plant: Newberry Plant, FL.
Product: EcoStrong PLC Type IL (10) MS
Silo: 1,2, 4, 6
Manufactured: October 2023

ASTM C595 and AASHTO M 240 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	6.0
SiO ₂ (%)	---	18.6	Blaine Fineness (m ² /kg) (C204)	---	474
Al ₂ O ₃ (%)	---	4.6	Fineness, No. 325 sieve, (% retained) (C430)	---	1.0
Fe ₂ O ₃ (%)	---	3.2			
CaO (%)	---	63.2	Density of Cement (g/cm ³) (C188)	---	3.08
MgO (%)	---	0.8	Compressive strength (MPa, [PSI]) (C109)		
SO ₃ (%)	3.0 max *	2.9	1 day	---	15.2 [2210]
Loss on ignition (%)	10.0 max	5.4	3 days	13.0 [1890] min	26.8 [3890]
Insoluble residue (%)	---	0.42	7 days	20.0 [2900] min	34.2 [4960]
Na ₂ O _{Eq} of Base Cement(%)	---	0.35 §	28 days (previous month's data)	25.0 [3620] min	44.4 [6440]
CO ₂ (%)	---	4.0	Time of setting (minutes)		
Limestone (%)	5 to 15	7.7	Vicat Initial (C191)	45 - 420	127
CaCO ₃ in Limestone (%)	70 min	91	3 Days Heat of Hydration (kJ/kg, [cal/g]) (C1702)		282 [67]
Inorganic Process Addition	---	1.9	Mortar Bar Expansion (%) (C1038)	0.020 max	0.009
Baghouse Dust	---				
Optional Chemical Information:			Physical Requirements for Blended Cements With Special Properties:		
Chloride (%)		0.000	Sulfate Resistance (% Expansion) (C1012)	0.10 max	0.04 at 180 days

--- Not applicable

* May exceed 3.0% SO₃ maximum based on our Test Method C1038 results of < 0.020 % expansion at 14 days.

§ Please refer to ASTM C1778 or AASHTO R 80 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 standards of ASTM C595, AASHTO M 240, FDOT Section 921, TDOT

Argos USA - Newberry Plant
 4000 NW CR 235, Newberry, FL 32669

Certified By:

Ana Sanchez - Quality Coordinator
 Report created: November 10, 2023