



# Cement Mill Test Report

Month of Issue: June 2022

<b>Plant:</b>	Newberry Plant, FL.
<b>Product:</b>	EcoStrong PLC Type IL (10) MS
<b>Silo:</b>	2, 4, 6
<b>Manufactured:</b>	May 2022

## 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	7.6
SiO <sub>2</sub> (%)	---	18.1	Blaine Fineness (m <sup>2</sup> /kg) (C204)	---	471
Al <sub>2</sub> O <sub>3</sub> (%)	---	4.3	Fineness, No. 325 sieve, (% retained) (C430)	---	97.8
Fe <sub>2</sub> O <sub>3</sub> (%)	---	3.1	Autoclave test (%) (C151)	-0.20 to 0.80	0.58
CaO (%)	---	62.4	Density of Cement (g/cm <sup>3</sup> ) (C188)	---	3.11
MgO (%)	---	1.3	Compressive strength (MPa, [PSI]) (C109)		
SO <sub>3</sub> (%)	3.0 max *	2.6	1 day	---	14.9 [2160]
Loss on ignition (%)	10.0 max	6.1	3 days	13.0 [1890] min	25.9 [3760]
Insoluble residue (%)	---	0.70	7 days	20.0 [2900] min	32.7 [4740]
Na <sub>2</sub> O <sub>Eq</sub> of Base Cement(%)	---	0.41 §	28 days (previous month's data)	25.0 [3620] min	43.2 [6260]
CO <sub>2</sub> (%)	---	4.8	Time of setting (minutes)		
Limestone (%)	5 to 15	8.7	Vicat Initial (C191)	45 - 420	139
CaCO <sub>3</sub> in Limestone (%)	70 min	93	3 Days Heat of Hydration (kJ/kg, [cal/g]) (C1702)		282 [67]
Inorganic Process Addition	---	3.3	Mortar Bar Expansion (%) (C1038)	0.020 max	0.004
Baghouse Dust					
<b>Optional Chemical Information:</b>			<b>Physical Requirements for Blended Cements With Special Properties:</b>		
Chloride (%)		0.006	Sulfate Resistance (% Expansion) (C1012)	0.10 max	0.02 at 180 days

--- Not applicable

\* May exceed 3.0% SO<sub>3</sub> 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

Certified By:

Oscar Echavarria - Quality Manager

Report created: June 14, 2022

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