

# ASH GROVE CEMENT COMPANY



Sumterville Plant  
4750 E County Road 470  
Sumterville, Florida 33585  
Phone #: (352)-559-9974

Blended Cement Type: IL(13) (MS)

Production Period April 1, 2024 - 4/31/2024  
ASTM C595/C595M  
REQUIREMENTS

Date: May 13, 2024

Silos: 1, 2, 3, 5

CHEMICAL			PHYSICAL		
Item	Spec. Limit	Test Result	Item	Spec. Limit	Test Result
Sulfate as SO <sub>3</sub> (%)	3.0 max <sup>A</sup>	3.1	Air content of mortar (volume %)	12 max	4.3
Loss on ignition (%)	10.0 max	6.7	Blaine Fineness (m <sup>2</sup> /kg)	<sup>B</sup>	5,158
Equivalent alkali content of Portland Cement (Na <sub>2</sub> O <sub>eq</sub> %) <sup>F</sup>	<sup>B</sup>	0.35	Fineness, No. 325 sieve (% retained)	<sup>B</sup>	1.0
Limestone (%)	>5 and ≤15	12.1	Density (g/cm <sup>3</sup> )	<sup>B</sup>	3.05
CaCO <sub>3</sub> in limestone (%)	70 min	94	Compressive strength (psi)		
			1 day	<sup>B</sup>	2,350
			3 days	1,890 min	4,390
			7 days	2,900 min	5,490
			28 days <sup>E</sup>	3,620 min	6,750
			Time of initial setting (Vicat)		
			Not less than (minutes)	45	101
			Not more than (minutes)	420	
			Heat of hydration, C1702/1702M, (kJ/kg) <sup>C</sup>		
			3 days	<sup>B</sup>	280
Optional information			Mortar Bar Expansion, C1038/C1038M, (%) <sup>C</sup>	0.020 max <sup>D</sup>	0.009
Equivalent alkali content of finished cement (Na <sub>2</sub> O <sub>eq</sub> %)	<sup>B</sup>	0.31	Sulfate resistance, C1012/1012M, (%) <sup>C</sup>		
			Expansion at 180 days	0.10 max	0.05

Additional Data			
Item	Limestone	Inorganic Processing Addition	
Amount	12.1	1.0	
SiO <sub>2</sub> (%)	4.2	8.9	
Al <sub>2</sub> O <sub>3</sub> (%)	0.4	1.4	
Fe <sub>2</sub> O <sub>3</sub> (%)	0.2	4.3	
CaO (%)	51.6	46.5	
SO <sub>3</sub> (%)	0.1	0.3	

<sup>A</sup> Default table maximum may be exceeded if Test Method ASTM C1038/C1038M limit is met.

<sup>B</sup> Not applicable.

<sup>C</sup> Test results for this production period not available. Most recent test result provided.

<sup>D</sup> Required only if percent SO<sub>3</sub> exceeds the limit in Table 1.

<sup>E</sup> As per ASTM C1778, Portland Cement is defined as "Clinker + Gypsum" constituents and is to be used for calculating equivalent alkalis in the base cement.

We certify that the above described blended cement, at the time of shipment, meets the chemical and physical requirements of the ASTM C595/C595M Type IL(MS) and AASHTO M240 Blended Hydraulic Cement specifications as well as all applicable FDOT (Facility ID: CMT40) and GDOT (Source Code: 17) specifications for Type IL(MS) Cement.

Signature: \_\_\_\_\_  
Name: Ramón L. Olivero

Title: Quality Control Manager