

ASH GROVE CEMENT COMPANY



Branford Plant
5117 N US Hwy 27
Branford, Florida 32008
Phone #: (352)-559-9974

Blended Cement Type: IL(13) (MS)

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

Date: April 15, 2024

Silos: 2, 3, 4, 5

CHEMICAL			PHYSICAL		
Item	Spec. Limit	Test Result	Item	Spec. Limit	Test Result
Sulfate as SO ₃ (%)	3.0 max ^A	2.9	Air content of mortar (volume %)	12 max	4.2
Loss on ignition (%)	10.0 max	6.0	Blaine Fineness (m ² /kg)	^B	462
Equivalent alkali content of Portland Cement (Na ₂ O _{eq} %) ^F	^B	0.34	Fineness, No. 325 sieve (% retained)	^B	1.5
Limestone (%)	>5 and ≤15	11.8	Density (g/cm ³)	^B	3.05
CaCO ₃ in limestone (%)	70 min	91	Compressive strength (psi)		
			1 day	^B	2,248
			3 days	1,890 min	4,278
			7 days	2,900 min	5,613
			28 days ^E	3,620 min	7,281
			Time of initial setting (Vicat)		
			Not less than (minutes)	45	97
			Not more than (minutes)	420	
			Heat of hydration, C1702/1702M, (kJ/kg) ^C		
			3 days	^B	269
Optional information			Mortar Bar Expansion, C1038/C1038M, (%) ^C	0.020 max ^D	0.001
Equivalent alkali content of finished cement (Na ₂ O _{eq} %)	^B	0.31	Sulfate resistance, C1012/1012M, (%) ^C		
			Expansion at 180 days	0.10 max	0.05

Additional Data		
Item	Limestone	Inorganic Processing Addition
Amount	11.8	1.0
SiO ₂ (%)	5.7	6.3
Al ₂ O ₃ (%)	0.5	4.1
Fe ₂ O ₃ (%)	0.2	1.1
CaO (%)	51.4	48.1
SO ₃ (%)	0.4	0.1

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

^B Not applicable.

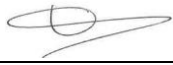
^C Test results for this production period not available. Most recent test result provided.

^D Required only if percent SO₃ exceeds the limit in Table 1.

^E Test result based on most recent monthly production time period.

^F 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 ALDOT (CAMMS ID: 10146), FDOT (Facility ID: CMT29), GDOT (Source Code: 53), NCDOT (Plant ID: CM69), and SCDOT specifications for Type IL(MS) Cement.

Signature: 
Name: Claudia Urrutia

Title: Quality Control Manager