



Suwannee American Cement Branford Plant

Portland Cement Type I-II (MH)

Silos: 2, 4, 5

Production Period : 10/1/2018 To 10/31/2018

STANDARD REQUIREMENTS

Chemical Data			Physical Data			
Item	Spec. Limit	Results	Item	Spec. Limit	Results	
SiO ₂ (%)	A	19.7	Air Content of mortar (volume %)	12 max	7	
Al ₂ O ₃ (%)	6.0 max	5.3	Blaine fineness (m ² /kg)**	260 min / 430 max	406	
Fe ₂ O ₃ (%)	6.0 max	3.5	Autoclave expansion (%)	0.80 max	0.01	
CaO (%)	A	64.2	Compressive strength (MPa/[psi]):			
MgO (%)	6.0 max	0.6		1 day		16.4 [2370]
SO ₃ (%)*	3.0 max	3.0		3 days	12.0[1740] min	28.3 [4110]
Loss of ignition (%)	3.5 max	2.7		7 days	19.0[2760] min	37.3 [5410]
Na ₂ O (%)	A	0.13	28 days (previous month)	28.0[4060] min	50.1 [7269]	
K ₂ O (%)	A	0.18	Time of setting (minutes)			
Insoluble residue (%)	1.5 max	0.25	(Vicat) Initial	45 min	92	
CO ₂ (%)	A	1.5	(Vicat) Final	375 max	195	
Limestone (%)	5.0 max	3.9	Heat of hydration (ASTM C1702 3d)	B	273	
CaCO ₃ in limestone (%)	70 min	88	Mortar Bar Expansion (ASTM C1038) (%)*	0.020 max	0.009	
Inorganic process addition (%)	5.0 max	--				
Sum of C ₃ S + 4.75C ₃ A	100 max	93				
Potential phase composition			Base Cement Phase Composition			
C ₃ S (%)	A	56	C ₃ S (%)		58	
C ₂ S (%)	A	14	C ₂ S (%)		14	
C ₃ A (%)	8 max	8	C ₃ A (%)		8	
C ₄ AF (%)	A	11	C ₄ AF (%)		11	

OPTIONAL REQUIREMENTS

Item	Spec. Limit	Results	Item	Spec. Limit	Results
Equiv. Alkalies (%)	0.60 max	0.25	False Set (%)	50 min	82
Chloride (%)	B	0.01	Density (ASTM C188) (g/cm ³)	B	3.15

Additional Data

Type	Limestone	Inorganic Processing Addition
Amount	3.9	--
SiO ₂ (%)	5.5	--
Al ₂ O ₃ (%)	0.5	--
Fe ₂ O ₃ (%)	0.2	--
CaO (%)	51.5	--
SO ₃ (%)	0.6	--

This cement meets ASTM C150-18 and AASHTO M 85-18 Specification for Type I-II Portland Cement

This cement also meets all applicable FDOT (Facility ID: CMT 29), GADOT (Source Code: 53), ALDOT (CAMMS ID: 10146), SCDOT,

and NCDOT (Plant ID: CM69) specifications for Type I-II cement

*It is permissible to exceed the max value for SO₃ content, provided it is demonstrated by ASTM C1038 that the cement will not develop expansion exceeding 0.020% in 14 Days

** Maximum fineness limits do not apply if the sum of C₃S + 4.75C₃A is less than or equal to 90.

A Not applicable.

B Test result represents most recent value and is provided for information only.

November 16, 2018

Brandford Cement Plant

Suwannee American Cement

5117 U.S. Hwy 27

Brandford, FL 32008

Tel: (386) 935-5013 - Fax: (386) 935-5080

Claudia Urrutia
Quality Manager