



Suwannee American Cement Branford Plant

Portland Cement Type III

Silo:3

Production Period : 12/1/2018 To 12/31/2018

STANDARD REQUIREMENTS

Chemical Data			Physical Data		
Item	Spec. Limit	Results	Item	Spec. Limit	Results
SiO ₂ (%)	A	19.4	Air Content of mortar (volume %)	12 max	74
Al ₂ O ₃ (%)	A	5.3	Blaine fineness (m ² /kg)		600
Fe ₂ O ₃ (%)	A	3.6	Autoclave expansion (%)	0.80 max	0.02
CaO (%)	A	64.0			
MgO (%)	6.0 max	0.6	Compressive strength (MPa/psi):		
SO ₃ (%)*	3.5 max	3.3	1 day	12.0[1740] min	25.2 [3650]
Loss of ignition (%)	3.5 max	3.0	3 days	24.0[3480] min	40.5 [5880]
Na ₂ O (%)	A	0.12	7 days		49.8 [7220]
K ₂ O (%)	A	0.16	28 days (previous month)		62.1 [9000]
Insoluble residue (%)	1.5 max	0.25	Time of setting (minutes)		
CO ₂ (%)	A	1.9	(Vicat) Initial	45 min	85
Limestone (%)	5.0 max	4.8	(Vicat) Final	375 max	160
CaCO ₃ in limestone (%)	70 min	88			
Inorganic process addition (%)	5.0 max	--			
			Mortar Bar Expansion (ASTM C1038) (%)*	0.020 max	A
Potential phase composition			Base Cement Phase Composition		
C ₃ S (%)	A	58	C ₃ S (%)		61
C ₂ S (%)	A	11	C ₂ S (%)		11
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	0.23	False Set (%)	50 min	74
Chloride (%)	B	0.01	Density (ASTM C188) (g/cm ³)	B	3.10

Additional Data

Type	Limestone	Inorganic Processing Addition
Amount	4.8	--
SiO ₂ (%)	6.8	--
Al ₂ O ₃ (%)	0.6	--
Fe ₂ O ₃ (%)	0.5	--
CaO (%)	49.8	--
SO ₃ (%)	0.4	--

This cement meets ASTM C150-18 and AASHTO M 85-18 Specification for Type III Moderate Sulfate Resistance Portland Cement

This cement also meets all applicable FDOT (Facility ID: CMT 29) specifications for Type III cement

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

A Not applicable.

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

January 16, 2019

Brandford Cement Plant

Suwannee American Cement

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