



Suwannee American Cement Branford Plant

Portland Cement Type III

Silo: 3

Production Period : 2/1/2020 To 2/29/2020

STANDARD REQUIREMENTS

Chemical Data			Physical Data		
Item	Spec. Limit	Results	Item	Spec. Limit	Results
SiO ₂ (%)	A	20.2	Air Content of mortar (volume %)	12 max	6
Al ₂ O ₃ (%)	A	5.2	Blaine fineness (m ² /kg)		576
Fe ₂ O ₃ (%)	A	3.3	Autoclave expansion (%)	0.80 max	0.03
CaO (%)	A	64.5			
MgO (%)	6.0 max	0.6	Compressive strength (MPa/psi):		
SO ₃ (%)*	3.5 max	2.9	1 day	12.0[1740] min	23.5 [3410]
Loss of ignition (%)	3.5 max	2.9	3 days	24.0[3480] min	37.4 [5420]
Na ₂ O (%)	A	0.14	7 days		44.7 [6480]
K ₂ O (%)	A	0.23	28 days (previous month)		55.6 [8070]
Insoluble residue (%)	1.5 max		Time of setting (minutes)		
CO ₂ (%)	A	1.6	(Vicat) Initial	45 min	72
Limestone (%)	5.0 max	4.1	(Vicat) Final	375 max	180
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	55	C ₃ S (%)		57
C ₂ S (%)	A	16	C ₂ S (%)		16
C ₃ A (%)	8 max	8	C ₃ A (%)		8
C ₄ AF (%)	A	10	C ₄ AF (%)		11

OPTIONAL REQUIREMENTS

Item	Spec. Limit	Results	Item	Spec. Limit	Results
Equiv. Alkalies (%)	0.60 max	0.29	False Set (%)	50 min	78
Chloride (%)	B	0.01	Density (ASTM C188) (g/cm ³)	B	3.10

Additional Data

Type	Limestone	Inorganic Processing Addition
Amount	4.1	--
SiO ₂ (%)	7.0	--
Al ₂ O ₃ (%)	0.5	--
Fe ₂ O ₃ (%)	0.2	--
CaO (%)	50.5	--
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.

March 16, 2020

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