



Ash Grove Sumterville Plant

Portland Cement Type IL (13)

Silos: 1, 2, 3, 5

March Mill Certificate

Production Period : 2/1/2023 To 2/28/2023

STANDARD REQUIREMENTS

Chemical Data			Physical Data			
Item	Spec. Limit	Results	Item	Spec. Limit	Results	
SiO ₂ (%)	A	18.5	Air Content of mortar (volume %)	12 max	5	
Al ₂ O ₃ (%)	A	4.3	Blaine fineness (m ² /kg)**	A	502	
Fe ₂ O ₃ (%)	A	3.1	Autoclave expansion (%)	-0.20 min/0.80 max	0.01	
CaO (%)	A	62.7	Fineness, retained in #325	A	1.0	
MgO (%)	A	0.8	Compressive strength (MPa/[psi]):			
SO ₃ (%)*	3.0 max	2.9		1 day		15.6 [2260]
Loss of ignition (%)	10.0 max	6.7		3 days	13.0[1890] min	28.1 [4080]
Na ₂ O (%)	A	0.05		7 days	20.0[2900] min	36.1 [5230]
K ₂ O (%)	A	0.35	28 days (previous month)	28.0[4060] min	45.2 [6560]	
			Time of setting (minutes)			
CO ₂ (%)	A	5.1	(Vicat) Initial	45 min	115	
Limestone (%)	15.0 max	13.8	(Vicat) Final	375 max	235	
CaCO ₃ in limestone (%)	70 min	89	Sulfate Resistance (ASTM C1012 180d) (%)	0.10 max	0.05	
Inorganic process addition (%)	5.0 max	1.0	Heat of hydration (ASTM C1702 3d, J/g [cal/g])	B	277 66	
			Mortar Bar Expansion (ASTM C1038) (%)*	0.020 max	0.003	

OPTIONAL REQUIREMENTS

Item	Spec. Limit	Results	Item	Spec. Limit	Results
Equiv. Alkalies (%)	0.60 max	0.28	Density (ASTM C188) (g/cm ³)	B	3.05
Chloride (%)	B	0.01			

Additional Data

Type	Limestone	Inorganic Processing Addition
Amount	13.8	1.0
SiO ₂ (%)	5.6	8.2
Al ₂ O ₃ (%)	0.6	1.3
Fe ₂ O ₃ (%)	0.2	4.1
CaO (%)	51.6	47.2
SO ₃ (%)	0.0	0.1

This cement meets ASTM C595 and AASHTO M240 Specification for Type IL (MS) Portland Cement.

This cement also meets all applicable FDOT (Facility ID: CMT 40) specifications for Type IL 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.

A Not applicable.

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

C Test result is not yet available.

March 7, 2023

Sumterville Cement Plant

Ash Grove

4750 E County Rd 470

Sumterville, Florida 33585

Tel: (352) 569-5393 - Fax: (352) 569-5397

Ramon Olivero
Quality Control Manager