

ASTM C618-19 - Chemical and Physical Analysis of Pozzolans

CTL Ticket: 20172	Plant of Origin Fly Ash (Bridger Power Plant)	Sample Date Range: 10/16/2020
CTL Project: CT16927	Sample ID: BSL-002-20	to: 10/30/2020
Report Date: 12/09/2020	Supplier: Bridgesource	Date Received: 11/06/2020

Chemical Composition (%) <small>(by Wyoming Analytical Laboratories, Inc.)</small>		ASTM C618-19		
		Class N	Class F	Class C
Silicon Dioxide:	62.2			
Aluminum Oxide:	17.8			
Iron Oxide:	4.5			
Total Silica, Aluminum, Iron:	84.5	≥70.0%	≥50.0%	≥50.0
Sulfur Trioxide:	0.7	≤4.0%	≤5.0%	≤5.0%
Calcium Oxide:	5.8	N/A	≤18.0%	>18.0%
Magnesium Oxide:	1.86	N/A	N/A	N/A
Total Alkalis, as NaO ₂ :	4.30			
Sodium:	3.55	Product Class:		
Potassium:	1.14	Conforms to Class:		

Volatile Composition (Mass%)				
Moisture Content:	0.1	≤3.0%	≤3.0%	≤3.0%
Loss on Ignition:	0.4	≤10.0%	≤6.0%	≤6.0%

Physical Test Results				
Fineness, Retained on #325 Sieve (%):	26.9	≤34%	≤34%	≤34%
Strength Activity Index (%)				
Ratio to Control @ 7 Days:	84	≥75%	≥75%	≥75%
Ratio to Control @ 28 Days:		≥75%	≥75%	≥75%
Water Requirement, % of Control:	96	≤115%	≤105%	≤105%
Soundness, Autoclave Expansion (%):	0.01	≤0.8%	≤0.8%	≤0.8%
Density (g/cm ³):	2.34	N/A	N/A	N/A

Uniformity Established from 0 previous tests				
Average Fineness:	No Uniformity Difference 26.9(%)	±5(%)	±5(%)	±5(%)
Average Density:	No Uniformity Difference No Uniformity	±5%	±5%	±5%

Supplementary Requirements				
Available Alkalis as NaO ₃ :	%			
Sodium Oxide:	%	Drying Shrinkage %:		Max 0.03%
Potassium Oxide:	%			

Comments:

CTL | Thompson Materials Engineers, Inc.



Orville R. Werner, P.E.