

ASTM C618 / AASHTO M295 Testing of Coal Creek Station Fly Ash

Sample Date: 4/16 - 4/20/18
Sample Type: composite
Sample ID:

Report Date: 6/8/2018
MTRF ID: 1106CC

Chemical Analysis	Results	ASTM Limit Class F/C	AASHTO Limit Class F/C
Silicon Dioxide (SiO ₂)	<u>48.99</u> %		
Aluminum Oxide (Al ₂ O ₃)	<u>16.09</u> %		
Iron Oxide (Fe ₂ O ₃)	<u>6.32</u> %		
Sum (SiO ₂ +Al ₂ O ₃ +Fe ₂ O ₃)	<u>71.40</u> %	70.0/50.0 min	70.0/50.0 min
Sulfur Trioxide (SO ₃)	<u>0.87</u> %	5.0 max	5.0 max
Calcium Oxide (CaO)	<u>14.34</u> %		
Magnesium Oxide (MgO)	<u>4.45</u> %		
Sodium Oxide (Na ₂ O)	<u>4.15</u> %		
Potassium Oxide (K ₂ O)	<u>2.33</u> %		
Sodium Oxide Equivalent (Na ₂ O+0.658K ₂ O)	<u>5.68</u> %		
Moisture	<u>0.03</u> %	3.0 max	3.0 max
Loss on Ignition	<u>0.18</u> %	6.0 max	5.0 max
Available Alkalies, as Na ₂ O _e	<u>2.24</u> %	Not Required	1.5 max* <small>*when required by purchaser</small>
Physical Analysis			
Fineness, % retained on 45-µm sieve	<u>20.58</u> %	34 max	34 max
Fineness Uniformity	<u>0.42</u> %	±5 max	±5 max
Strength Activity Index - 7 or 28 day requirement			
7 day, % of control	<u>95</u> %	75 min	75 min
28 day, % of control	<u>96</u> %	75 min	75 min
Water Requirement, % control	<u>94</u> %	105 max	105 max
Autoclave Soundness	<u>0.04</u> %	0.8 max	0.8 max
Density	<u>2.51</u>		
Density Uniformity	<u>1.55</u> %	±5 max	±5 max

Boral Resources certifies that pursuant to current ASTM C618 protocol for testing, the test data listed herein was generated by applicable ASTM methods and meets the requirements of ASTM C618.


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