

## INDIAN ORIGIN FLY ASH REF #1.1 TEST ANALYSIS RESULTS

Chemical Composition	Limits	Code/Method	Typical Results
Loss on ignition	<= 6.0%	ASTM C618	0.52%
Chloride	<= 0.10%	ASTM C618	0.01%
Sulfuric Trioxide (SO <sub>3</sub> )	<= 5.0%	ASTM C618	0.54%
Free calcium oxide	<= 1.5%	ASTM C618	1.48%
Reactive Calcium Dioxide	<= 10.0%	ASTM C618	5.90%
Reactive Silicon Dioxide	>= 25.0%	ASTM C618	50.75%
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> )	>=15.0%	ASTM C618	19.62%
Iron oxide (Fe <sub>2</sub> O <sub>3</sub> )	<=15.0%	ASTM C618	10.30%
Silicon Dioxide (SiO <sub>2</sub> ) + Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ) + Iron oxide (Fe <sub>2</sub> O <sub>3</sub> )	Total >= 70.0%	ASTM C618	80.52%
Equivalent Alkalis (Na <sub>2</sub> O + 0.658K <sub>2</sub> O)	<= 5.0%	ASTM C618	2.50%
Magnesium Oxide (MgO)	< 5.0%	ASTM C618	3.24%
Soluble phosphate	< 100mg/kg	ASTM C618	47 mg/kg
Fineness (Category S) 12% max	<=12%	ASTM C618	10.36%
Fineness (Category N) 40% max	<= 25 %	ASTM C618	18.06%
<b>Physical Parameters/Activity index</b>			
- 7 days	>= 75.0%	ASTM C618	78.00%
- 28 days	>= 75.0%	ASTM C618	91.00%
- 90 days	>= 86.0%	ASTM C618	94.50%
Soundness (Expansion)	<= 1.0%	ASTM C618	0.52%
Particle density	+ 200kg/m <sup>3</sup>	ASTM C618	200 kg/ m <sup>3</sup>
Initial setting time	minutes	ASTM C618	200
Water requirement	<- 95.0%	ASTM C618	86.50%
Moisture	3 max	ASTM C618	0.06%

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