



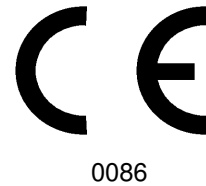
Fly ash Test Report

United Kingdom

Technical Department

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Date: **20 October 2011**

Aberthaw Fly ash BS EN 450-1
Fineness category:N, Loss on ignition category:A
Monthly average data for **June 2011**

A) Physical and chemical properties of the fly ash sample

Test Property	Test result	BS EN 450-1
Fineness (%)	13.0	declared value 22.0
Sulfuric anhydride (%)	0.0	max 3.0
Loss on ignition (%)	3.5	0.0 to 5.0
Chloride (%)	0.00	max 0.1
Calcium oxide (%)	3.0	max 10.0
SiO ₂ +Al ₂ O ₃ +Fe ₂ O ₃ (%)	85.5	min 70.0
Free Lime (%)	0.43	max 1.0
Acid soluble alkali (%)	2.35	max 5.0
Additional information:		
Declared particle density (kg/m ³)	2270	

B) Physical properties of a 25:75 blend of the fly ash with a reference Portland cement

PC Source: **Ribblesdale**
PC Initial setting time (min): **160**
PC 28 day strength (MPa) **64.3**

Test Property	Test result	BS EN 450-1
Activity index @ 28 days	76	min 75
Initial Setting Time (min)	240	max 120min more than PC

Note: This report has been produced from data supplied by the manufacturer, Celtic Ash

For and on behalf of Lafarge Cement UK :

National Commercial Technical Manager