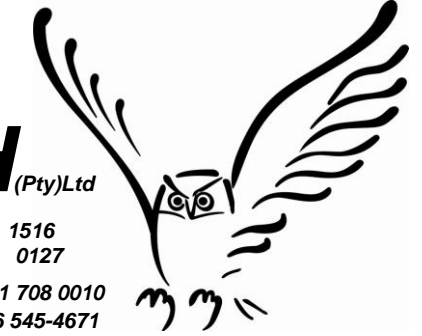


2008/005640/07

ULULA ASH



P O Box 1516
Silverton 0127

Tel : 011 708 0010
Fax : 086 545-4671

ULULA ASH KRIEL POWER STATION

TEST CERTIFICATE of the Classified Fly Ash {CFA}

The values shown below are from results obtained between July to December 2010 taken from our ongoing quality management systems as required by the South African National Standard {SANS}

Chemical Requirements	Tested percentages	Specification SANS 1491-2:2005
Sulphur Trioxide	0,79 - 1,21	Max. 2,5% by mass
Loss of ignition	0,84 - 1,25	Max. 5,0% by mass
Free water content	0,21 - 0,31	Max. 1,0% by mass
Physical Requirements	Test results	
Fineness retained on the 45 micron sieve	10,0 - 12,0 %	Max. 12,5% by mass
Water requirement	91 - 93 %	Max. 95% by mass of control
Strength factor	0,8 - 0,9	Minimum of 0,8
Soundness, expansion	0,5 mm	Max. of 10 mm

Additional information;

Chemical Composition	Typical percentages
SiO ₂	50,0 - 52,0
Al ₂ O ₃	28,5 - 29,5
Fe ₂ O ₃	2,0 - 3,0
CaO	8,0 - 10,0
MgO	2,0 - 2,5
K ₂ O	< 1
Na Equivalent	< 1.5
TiO ₂	1,5 - 2,0

Date issued: 28 February 2011

Issued by: Mark Hovy

Your attention is drawn to the fact that Afrisam Product Technical Laboratory has been contracted by us to do our product conformance testing according to the relevant SANS test methods.

AfriSam

a SANAS testing laboratory no. T0377.

sanas
South African National
Accreditation System

Directors: C.D Billett, M.F.Hovy, A. Thedvall