# STANDARD FLY ASH CERTIFICATE



FINAL

Prior Reports: None

### Certificate Number: CERT201615 Issued: 31 July 2020

Product being certified: Product sample date: Sample Identification: Source Power Station: Sample Condition: Certifying Laboratory: Muja Power Station Monthly Grab Fly Ash 01-Jul-2020 Sample Code: 20070377 Muja Power Station Tested as Received. Testing Commenced on 10-Jul-2020 Cement Australia - Darra Laboratory, 18 Station Avenue, Darra Queensland 4076 Australia.

## **Test Results**

Test	Moisture	Fineness @ 45 micron	Loss on Ignition	Sulfuric Anhydride	Available Alkali	Chloride Ion	Chemical Composition
	%	% Passed	%	%	%	%	%
Result	< 0.1	83	0.8	0.2	n/a	0.002	95.3
Test Method	AS3583.2	AS3583.1	AS3583.3	AS2350.2	AS3583.12	AS3583.13	AS2350.2
AS 3582.1	0.5 % Maximum	75% Minimum	4.0 % Maximum	3.0 % Maximum	-	0.1 % Maximum	70% Minimum

Test	Relative Density	Relative Water Requirement	Strength Index 7 Day Acc.	Reference Cement Details	
		%	%	Identification:: 20070766	
Result	2.41	96	99	Source: Goliath GP	
Test Method	AS3583.5	AS3583.6	AS3583.6	Product Type: Type GP	
AS 3582.1	-	-	75% Minimum	Sample Date: 21-Jul-20	

### **Additional Testing - Oxides**

Test	CaO by XRF	SiO <sub>2</sub> by XRF	Al <sub>2</sub> O <sub>3</sub> by XRF	Fe <sub>2</sub> O <sub>3</sub> by XRF	SO <sub>3</sub> by XRF	MgO by XRF	Na₂O by XRF
	%	%	%	%	%	%	%
Result	0.8	59.9	21.3	14.1	0.2	0.9	0.23
Test Method	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2

Test	K₂O by XRF	SrO by XRF	TiO2 by XRF	P <sub>2</sub> O <sub>5</sub> by XRF	Mn <sub>2</sub> O <sub>3</sub> by XRF	Total Alkali (NaEQ)
	%	%	%	%	%	%
Result	0.54	<0.1	1.4	0.4	0.1	0.59
Test Method	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2

#### This sample grade conforms to the following requirements of AS 3582.1:2016

Special Grade 1 Grade 2 X



Signatory - Cement Australia Chemical Testing Construction Materials Testing

Notes:

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Cement Australia - Darra Laboratory NATA Accredited Laboratory Numbers 187 188



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