

CERTIFICATE OF ANALYSIS

**CERTIFICATE No.** 1188-19

**TEST CERTIFICATE FOR:** Type Grade 1 Fly Ash

**PRODUCED AT:** Sunstate Cement Ltd, Port of Brisbane

**SAMPLE IDENTIFICATION:** Monthly Composite for the month of June '19

**MATERIAL SOURCE:** Tarong Power station

**POINT OF SAMPLING:** Final product air slide, Sunstate Cement Ltd, Port of Brisbane

**SAMPLE TESTED AT:** Sunstate Cement Ltd, Port of Brisbane

**SAMPLE IDENTIFICATION:** U6M-000148



NATA accredited laboratory  
 Laboratory Number: 2191  
 Accredited for compliance with  
 ISO/IEC 17025 Testing  
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SPECIFIED PROPERTY	TEST METHOD	AS3582.1 REQUIREMENTS		RESULT
Fineness	AS 3583.1	Minimum	75 %	82 %
Loss on ignition	AS 3583.3	Maximum	4 %	0.7 %
Moisture content	AS 3583.2	Maximum	0.5 %	0.1 %
SO <sub>3</sub>	Inhouse	Maximum	3 %	0.3 %
Total Alkali	AS 2350.2			0.5 %
Available Alkali	AS 3583.12			0.1 %
Chloride	AS 3583.13	Maximum	0.1 %	0.002 %
SiO <sub>2</sub> + Al <sub>2</sub> O <sub>3</sub> + Fe <sub>2</sub> O <sub>3</sub>	AS 2350.2	Minimum	70 %	95 %
Relative Density	AS 3583.5			2.2 g/cm <sup>3</sup>
Relative Water	AS 3583.6			101 %
Relative Strength	AS 3583.6	Minimum	75 %	97.1 %

**SAMPLING PROCEDURE:** Fly ash samples obtained according to the requirements of AS2350.1

**REMARKS:**

- The results of the above tests relate only to the sample as described above.
- Total Alkali determined at Australian Laboratory Services by ICP -AES using ME -ICP 91, Corporate Accreditation No 825, Corporate Site 818.
- XRF Analytical results determined at Australian Laboratory Services by XRF using ME -XRF 26, Corporate Accreditation No 825, Corporate Site 818.
- Available alkali determined by: Boral Material Technical Services Accreditation No 547.



**G Santaguiliana**  
**Approved Signatory**  
**4-Sep-2019**