STANDARD FLY ASH CERTIFICATE



FINAL

Prior Reports: None

Certificate Number: CERT200311

Issued: 12 February 2020

Flyash Australia Pty Ltd
ABN 68 002 840 271
Head Office
C/- Lindfield Corporate Centre
Suite 18, 12 Tryon Road
Lindfield NSW 2070

Tel: (02) 9413 8422 Fax: (02) 9413 84.32

Product being certified: Bayswater - Microash Monthly Grab Fly Ash

Product sample date: 14-Jan-2020

Sample Identification: Sample Code: 20010574
Source Power Station: Bayswater Power Station

Sample Condition: Tested as Received. Testing Commenced on 21-Jan-2020

Certifying Laboratory: 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 | 96 | 0.6 | 0.1 | n/a | < 0.001 | 95.9 |
| Test Method | AS3583.2 | AS3583.1 | AS3583.3 | AS2350.2 | AS3583.12 | AS3583.13 | AS2350.2 |
| AS 3582.1 | 0.5% Maximum | 85% Minimum | 3.0 % Maximum | 3.0% Maximum | - | 0.1 % Maximum | 70% Minimum |

| Test | Relative Density | Relative Water Requirement | Strength Index 7 Day Acc. | Reference Cement Details | |
|-------------|---------------------|-------------------------------|---------------------------|---------------------------|--|
| | | % | % | Identification:: 20010841 | |
| Result | 2.35 | 90 | 131 | Source: Goliath GP | |
| Test Method | AS3583.5 | AS3583.6 | AS3583.6 | Product Type: Type GP | |
| AS 3582.1 | - | - | Exceeds 105% | Sample Date: 29-Jan-20 | |

Additional Testing - Oxides

| Test | CaO by XRF % | SiO ₂ by XRF % | Al ₂ O ₃ by XRF % | Fe ₂ O ₃ by XRF % | SO ₃ by XRF % | MgO by XRF % | Na₂O by XRF % |
|------------|--------------------|---------------------------------|---|---|--------------------------------|--------------------|---------------------|
| Result | 0.5 | 74.8 | 17.5 | 3.6 | 0.1 | 0.4 | 0.16 |
| Test Metho | d 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 ₂ O ₅ by XRF | Mn ₂ O ₃ by XRF | Total Alkali (NaEQ) |
|-------------|---------------|---------------|----------------|---|--|------------------------|
| | % | % | % | % | % | % |
| Result | 0.97 | <0.1 | 0.6 | 0.4 | < 0.1 | 0.80 |
| 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 | X | |

Approved Signatory

A Prem Signatory - Cement Australia Chemical Testing

Construction Materials Testing

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



Notes:

