

STANDARD FLY ASH CERTIFICATE



FINAL
Prior Reports: None

Flyash Australia Pty Ltd
ABN 68 002 840 271
P.O. Box 190
Eastwood NSW 2122
Email: contact@flyash.com.au
www.flyashaustralia.com.au

Certificate Number: CERT212610
Issued: 15 September 2021

Product being certified: Collie Monthly Grab Fly Ash
Product sample date: 19-Aug-2021
Sample Identification: Sample Code: 21081120
Source Power Station: Collie Power Station
Sample Condition: Tested as Received. Testing Commenced on 30-Aug-2021
Certifying Laboratory: Cement Australia - Darra Laboratory,
18 Station Avenue, Darra Queensland 4076 Australia.

Test Results

| Test | Moisture % | Fineness @ 45 micron % Passed | Loss on Ignition % | Sulfuric Anhydride % | Available Alkali % | Chloride Ion % | Chemical Composition % |
|-------------|---------------|-------------------------------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------------|
| Result | < 0.1 | 83 | 0.5 | 0.2 | n/a | < 0.001 | 94.4 |
| 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 |
|-------------|---------------------|------------------------------------|-----------------------------------|---|
| Result | 2.52 | 94 | 110 | Identification:: 21081189 Source: Goliath GP |
| Test Method | AS3583.5 | AS3583.6 | AS3583.6 | Product Type: Type GP |
| AS 3582.1 | - | - | 75% Minimum | Sample Date: 31-Aug-21 |

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 % | Na ₂ O by XRF % |
|-------------|--------------------|---------------------------------|---|---|--------------------------------|--------------------|----------------------------------|
| Result | 0.9 | 55.8 | 27.8 | 10.8 | 0.2 | 0.9 | 0.26 |
| Test Method | AS2350.2 | AS2350.2 | AS2350.2 | AS2350.2 | AS2350.2 | AS2350.2 | AS2350.2 |

| Test | K ₂ O by XRF % | SrO by XRF % | TiO ₂ by XRF % | P ₂ O ₅ by XRF % | Mn ₂ O ₃ by XRF % | Total Alkali (NaEQ) % |
|-------------|---------------------------------|--------------------|---------------------------------|--|---|-----------------------------|
| Result | 0.40 | 0.1 | 1.8 | 1.0 | < 0.1 | 0.52 |
| 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 | |

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



ACCREDITED FOR
**TECHNICAL
COMPETENCE**

Notes:

