

## **Test Certificate**

Lot 242 Russell Road East, Munster WA 6166 PO Box 38, Hamilton Hill WA 6963 T: +61 8 9411 1000 F: +61 8 9411 1150

Final

**Product Certified:** Ground Granulated Blast Furnace Slag

**Test Certificate Number:** 200219

**Despatched From:** Cockburn Cement, Port Hedland Plant, WA

 Sample Code:
 B077728

 Sample Date:
 23/04/2020

| Nominal Blend                             | Requirements | Result |
|---|--------------|--------|
| Ground Granulated Iron Blast-Furnace Slag |              | >95 %  |
| Calcium Sulphate                          |              | <5 %   |

| Reportable Property                       | Test Method    | Requirements of AS3582.2 | Result       |
|---|----------------|--------------------------|--------------|
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| Alumina (Al <sub>2</sub> O <sub>3</sub> ) | AS2350.2       | Max 18.0 %               | 16.9 %       |
| Total Iron (FeO)                          | AS2350.2       | N/R                      | 0.4 %        |
| Magnesia (MgO)                            | AS2350.2       | Max 15.0 %               | 9.8 %        |
| Total Alkali (Na₂O Equivalent)            | AS2350.2       | N/R                      | 0.5 %        |
| Manganese (MnO)                           | ASTM C114      | N/R                      | 0.4 %        |
| Sulfate (as SO <sub>3</sub> ) content     | AS3583.8       | N/R                      | 0.1 %        |
| Sulfide Sulfur (S)                        | AS3583.7       | Max 1.5 %                | 0.8 %        |
| Chloride Ion Content                      | AS3583.13      | Max 0.1 %                | 0.006 %      |
| Loss on Ignition                          | AS3583.3       | N/R                      | -1.0 %       |
| Insoluble Residue                         | AS3583.14      | N/R                      | 0.7 %        |
| 45 μm Residue                             | AS3583.1       | N/R                      | 98 % passing |
| Relative Density                          | AS3583.5       | N/R                      | 2.91         |
| Relative Water Requirement                | AS3583.6       | N/R                      | 100 %        |
| Strength Index                            | AS3583.6       | N/R                      | 103 %        |
| Other Properties                          |                |                          |              |
| SiO <sub>2</sub>                          | AS2350.2       | N/R                      | 30.9 %       |
| CaO                                       | AS2350.2       | N/R                      | 39.1 %       |
| Fineness Index                            | AS2350.8       | N/R                      | 395 m²/kg    |

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## REMARKS

These test results apply specifically to the above designated sample as received at the Adelaide Brighton Cement Birkenhead Laboratory (Accredited number: 252), 62 Elder Rd Birkenhead SA 5015.

For Relative Water and Strength Index testing the reference control used is Birkenhead GP code B0778b8.

This despatch grab sample complies to the requirements of AS3582.2:2016, Ground Granulated Blast Furnace Slag. N/R = No Requirement



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.

Approved Signatory
M. Wythe

**Issue Date:** 15/06/2020