

## **Cement Test Certificate**

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Final

**Product Certified:** Type GP Coarse General Purpose Cement

Test Certificate Number: 200080

Produced At: Cockburn Cement, Kwinana Plant, WA

Sample Code: B073fca
Sample Date: 11/01/2020

| Nominal Blend                             | Requirements | Result |
|---|--------------|--------|
| Clinker                                   |              | >95 %  |
| Ground Granulated Iron Blast-Furnace Slag |              | Nil    |
| Mineral Addition                          | Max 7.5 %    | Nil    |
| Calcium Sulphate                          |              | 5%     |
| Minor Additional Constituents             | Max 5 %      | Nil    |

| Panartable Branarty                           | Reportable Property Test Method | Requirements of | Dogult    |
|---|---------------------------------|-----------------|-----------|
| Reportable Property                           |                                 | AS3972          | Result    |
| 3 Day Strength                                | AS2350.11                       | N/R             | 38.9 MPa  |
| 7 Day Strength                                | AS2350.11                       | Min 35.0 MPa    | 52.0 MPa  |
| 28 Day Strength                               | AS2350.11                       | Min 45.0 MPa    | 63.5 MPa  |
| Initial Set Time                              | AS2350.4                        | Min 45 min      | 105 min   |
| Final Set Time                                | AS2350.4                        | Max 360 min     | 165 min   |
| Soundness                                     | AS2350.5                        | Max 5 mm        | 1 mm      |
| Sulfuric Anhydride content (SO <sub>3</sub> ) | AS2350.2                        | Max 3.5 %       | 3.2 %     |
| Chloride Ion                                  | BH-TM-0507                      | Max 0.10 %      | 0.013 %   |
| Other Properties                              |                                 |                 |           |
| SiO <sub>2</sub>                              | AS2350.2                        | N/R             | 20.3 %    |
| $Al_2O_3$                                     | AS2350.2                        | N/R             | 5.6 %     |
| $Fe_2O_3$                                     | AS2350.2                        | N/R             | 3.0 %     |
| CaO   | AS2350.2                        | N/R             | 64.7 %    |
| MgO   | AS2350.2                        | N/R             | 1.3 %     |
| Na <sub>2</sub> O Equivalent                  | AS2350.2                        | N/R             | 0.5 %     |
| Loss on Ignition                              | AS2350.2                        | N/R             | 1.2 %     |
| Fineness Index                                | AS2350.8                        | N/R             | 380 m²/kg |
| Normal Consistency                            | AS2350.3                        | N/R             | 29.0 %    |

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## **REMARKS**

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

This despatch grab sample complies to the requirements of AS3972:2010, Type GP Cement.  $\mbox{N/R} = \mbox{No Requirement}$ 



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:** 28/02/2020