COCKBURN CEMENT
ABN 50 006 673 470

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# Cement Test Certificate

Final

**Product Certified:** Type HE High Early Strength Cement (Crème)
**Test Certificate Number:** 200517
**Produced At:** Cockburn Cement, Kwinana Plant, WA
**Sample Code:** B07cd99
**Sample Date:** 1/11/2020

| Nominal Blend | Requirements | Result |
|---|---|---|
| Clinker | | >86.5 % |
| Ground Granulated Iron Blast-Furnace Slag | | Nil |
| Mineral Addition | Max 7.5 % | <5 % |
| Calcium Sulphate | | <5 % |
| Minor Additional Constituents | Max 5 % | Nil |

| Reportable Property | Test Method | Requirements of AS3972 | Result |
|---|---|---|---|
| 3 Day Strength | AS2350.11 | Min 25.0 MPa | 40.7 MPa |
| 7 Day Strength | AS2350.11 | Min 40.0 MPa | 45.0 MPa |
| 28 Day Strength | AS2350.11 | N/R | 60.2 MPa |
| Initial Set Time | AS2350.4 | Min 45 min | 105 min |
| Final Set Time | AS2350.4 | Max 360 min | 180 min |
| Soundness | AS2350.5 | Max 5 mm | 1 mm |
| Sulfuric Anhydride content ($SO_3$) | AS2350.2 | Max 3.5 % | 3.1 % |
| Chloride Ion | BH-TM-0507 | Max 0.10 % | 0.008 % |
| **Other Properties** | | | |
| $SiO_2$ | AS2350.2 | N/R | 21.2 % |
| $Al_2O_3$ | AS2350.2 | N/R | 3.6 % |
| $Fe_2O_3$ | AS2350.2 | N/R | 0.3 % |
| CaO | AS2350.2 | N/R | 64.3 % |
| MgO | AS2350.2 | N/R | 1.6 % |
| $Na_2O$ Equivalent | AS2350.2 | N/R | 0.5 % |
| Loss on Ignition | AS2350.2 | N/R | 4.7 % |
| Fineness Index | AS2350.8 | N/R | 425 $m^2/kg$ |
| Normal Consistency | AS2350.3 | N/R | 28.3 % |
| Brightness (L)* | MU-TM-2614 | N/R | 88 |



**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 HE Cement.
*NATA accreditation 252 does not cover the performance of this service.
N/R = No Requirement

NATA
WORLD RECOGNISED ACCREDITATION

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:** 30/12/2020