COCKBURN
CEMENT*
Product Certified:
Test Certificate Number:
Produced At:
Sample Code:
Sample Date:

Type LH Low Heat Cement 180874
Cockburn Cement, Kwinana Plant, WA
B0677ce
20/09/2018

| Nominal Blend | Requirements | Result |
| :--- | :---: | :---: |
| Clinker |  | $30 \%$ |
| Ground Granulated Iron Blast-Furnace Slag |  | $65 \%$ |
| Mineral Addition | Max $7.5 \%$ | Nil |
| Calcium Sulphate | Max 5\% | $<5 \%$ |
| Minor Additional Constituents | Nil |  |


| Reportable Property | Test Method | Requirements of AS3972 | Result |
| :---: | :---: | :---: | :---: |
| 3 Day Strength | AS2350.11 | N/R | 20.3 MPa |
| 7 Day Strength | AS2350.11 | Min 10.0 MPa | 34.7 MPa |
| 28 Day Strength | AS2350.11 | Min 30.0 MPa | 58.6 MPa |
| Initial Set Time | AS2350.4 | Min 45 min | 165 min |
| Final Set Time | AS2350.4 | Max 600 min | 210 min |
| Soundness | AS2350.5 | Max 5 mm | 0 mm |
| Sulfuric Anhydride content ( $\mathrm{SO}_{3}$ ) | AS3583.8 | Max 3.5 \% | 2.3 \% |
| Chloride Ion | BH-TM-0507 | Max 0.10\% | 0.011 \% |
| Peak Temp Rise | AS2350.7 | Max $23^{\circ} \mathrm{C}$ | $22.1{ }^{\circ} \mathrm{C}$ |
| Other Properties |  |  |  |
| $\mathrm{SiO}_{2}$ | AS2350.2 | N/R | 29.4 \% |
| $\mathrm{Al}_{2} \mathrm{O}_{3}$ | AS2350.2 | N/R | 11.2 \% |
| $\mathrm{Fe}_{2} \mathrm{O}_{3}$ | AS2350.2 | N/R | 1.3 \% |
| CaO | AS2350.2 | N/R | 48.1 \% |
| MgO | AS2350.2 | N/R | $4.6 \%$ |
| $\mathrm{Na}_{2} \mathrm{O}$ Equivalent | AS2350.2 | N/R | 0.5 \% |
| Loss on Ignition | AS2350.2 | N/R | 0.8 \% |
| Fineness Index | AS2350.8 | N/R | $430 \mathrm{~m}^{2} / \mathrm{kg}$ |
| Normal Consistency | AS2350.3 | N/R | 32.1 \% |

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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 LH Cement.
$\mathrm{N} / \mathrm{R}=\mathrm{No}$ 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.
OCDEDEATATIO


Approved Signatory
F. Pope

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