



ABN 50 006 673 470

Cement Test Certificate

Final

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Product Certified: Type LH Low Heat Cement
Test Certificate Number: 180643
Produced At: Cockburn Cement, Kwinana Plant, WA
Sample Code: B063d13
Sample Date: 9/05/2018

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

| Reportable Property | Test Method | Requirements of AS3972 | Result |
|---|-------------|------------------------|----------|
| 3 Day Strength | AS2350.11 | N/R | 17.1 MPa |
| 7 Day Strength | AS2350.11 | Min 10.0 MPa | 34.9 MPa |
| 28 Day Strength | AS2350.11 | Min 30.0 MPa | 58.9 MPa |
| Initial Set Time | AS2350.4 | Min 45 min | 180 min |
| Final Set Time | AS2350.4 | Max 600 min | 270 min |
| Soundness | AS2350.5 | Max 5 mm | 1 mm |
| Sulfuric Anhydride content (SO ₃) | AS3583.8 | Max 3.5 % | 2.1 % |
| Chloride Ion | BH-TM-0507 | Max 0.10 % | 0.010 % |
| Peak Temp Rise | AS2350.7 | Max 23 °C | 22.9 °C |

Other Properties

| | | | |
|--------------------------------|----------|-----|------------------------|
| SiO ₂ | AS2350.2 | N/R | 30.2 % |
| Al ₂ O ₃ | AS2350.2 | N/R | 11.0 % |
| Fe ₂ O ₃ | AS2350.2 | N/R | 1.4 % |
| CaO | AS2350.2 | N/R | 48.7 % |
| MgO | AS2350.2 | N/R | 4.7 % |
| Na ₂ O Equivalent | AS2350.2 | N/R | 0.5 % |
| Loss on Ignition | AS2350.2 | N/R | 0.3 % |
| Fineness Index | AS2350.8 | N/R | 425 m ² /kg |
| Normal Consistency | AS2350.3 | N/R | 33.0 % |

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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 LH Cement.

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

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