



ABN 50 006 673 470

Cement Test Certificate

Final

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Product Certified: Type HE High Early Strength Cement (Creme)
Test Certificate Number: 190459
Produced At: Cockburn Cement, Kwinana Plant, WA
Sample Code: B070591
Sample Date: 3/09/2019

| 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 | 45.6 MPa |
| 7 Day Strength | AS2350.11 | Min 40.0 MPa | 55.7 MPa |
| 28 Day Strength | AS2350.11 | N/R | 62.5 MPa |
| Initial Set Time | AS2350.4 | Min 45 min | 135 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 % | 3.2 % |
| Chloride Ion | BH-TM-0507 | Max 0.10 % | 0.014 % |

| Other Properties | | | |
|--------------------------------|------------|-----|------------------------|
| SiO ₂ | AS2350.2 | N/R | 21.9 % |
| Al ₂ O ₃ | AS2350.2 | N/R | 3.7 % |
| Fe ₂ O ₃ | AS2350.2 | N/R | 0.4 % |
| CaO | AS2350.2 | N/R | 65.0 % |
| MgO | AS2350.2 | N/R | 1.3 % |
| Na ₂ O Equivalent | AS2350.2 | N/R | 0.5 % |
| Loss on Ignition | AS2350.2 | N/R | 4.0 % |
| Fineness Index | AS2350.8 | N/R | 445 m ² /kg |
| Normal Consistency | AS2350.3 | N/R | 27.8 % |
| Brightness (L)* | MU-TM-2614 | N/R | 87 |

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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 HE Cement.

*NATA accreditation 252 does not cover the performance of this service.

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

F. Pope

Issue Date: 21/10/2019