

Cement Test Certificate Final

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ABN 22 009 593 515

Product Certified: Type GP General Purpose Cement

Test Certificate Number: 170629

Produced At: Northern Cement, Darwin Plant, NT

 Sample Code:
 B05e9a7

 Sample Date:
 11/10/2017

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

| Reportable Property | Test Method | Requirements of AS3972 | Result |
|-----------------------------------------------|-------------|------------------------|-----------|
| 3 Day Strength | AS2350.11 | N/R | 37.0 MPa |
| 7 Day Strength | AS2350.11 | Min 35.0 MPa | 45.4 MPa |
| 28 Day Strength | AS2350.11 | Min 45.0 MPa | 61.4 MPa |
| Initial Set Time | AS2350.4 | Min 45 min | 90 min |
| Final Set Time | AS2350.4 | Max 360 min | 150 min |
| Soundness | AS2350.5 | Max 5 mm | 1 mm |
| Sulfuric Anhydride content (SO ₃) | AS2350.2 | Max 3.5 % | 2.7 % |
| Chloride Ion | ASTM C114 | Max 0.10 % | 0.012 % |
| Other Properties | | | |
| SiO ₂ | AS2350.2 | N/R | 20.0 % |
| Al_2O_3 | AS2350.2 | N/R | 5.5 % |
| Fe_2O_3 | AS2350.2 | N/R | 2.9 % |
| CaO | AS2350.2 | N/R | 64.3 % |
| MgO | AS2350.2 | N/R | 1.5 % |
| Na₂O Equivalent | AS2350.2 | N/R | 0.6 % |
| Loss on Ignition | AS2350.2 | N/R | 1.8 % |
| Fineness Index | AS2350.8 | N/R | 325 m²/kg |
| Normal Consistency | AS2350.3 | N/R | 27.3 % |

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REMARKS

These test results apply specifically to the above designated sample as received for the date shown.

Adelaide Brighton Cement Birkenhead Laboratory (Accredited number: 252), 62 Elder Rd Birkenhead 5015, is responsible for testing in accordance with AS2350.2:2006, AS2350.8:2006 and in-house method BH-TM-0507.

Adelaide Brighton Cement Angaston Laboratory (Accredited number: 73), Stockwell Rd Angaston 5353, is responsible for testing in accordance with AS2350.3:2006, AS2350.4:2006, AS2350.5:2006, AS2350.11:2006 and AS2350.12:2006.

This despatch grab sample complies to the requirements of AS3972:2010, Type GP 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

F. Pope

Issue Date: 20/11/2017