



ABN 50 006 673 470

Cement Test Certificate

Final

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Product Certified: Type GP Coarse General Purpose Cement
Test Certificate Number: 230168
Customer: Cockburn Cement, Kwinana Plant, WA
Sample Code: B098eae
Sample Date: 10/03/2023

| Nominal Blend | Requirements | Result |
|---|--------------|--------|
| Clinker | | >92 % |
| Ground Granulated Iron Blast-Furnace Slag | | Nil |
| Mineral Addition | Max 7.5 % | <3 % |
| Calcium Sulphate | | 5% |
| Minor Additional Constituents | Max 5 % | Nil |

| Reportable Property | Test Method | Requirements of AS3972 | Result |
|---|---------------|------------------------|----------|
| 3 Day Strength | AS/NZS2350.11 | N/R | 40.8 MPa |
| 7 Day Strength | AS/NZS2350.11 | Min 35.0 MPa | 50.6 MPa |
| 28 Day Strength | AS/NZS2350.11 | Min 45.0 MPa | 62.1 MPa |
| Initial Set Time | AS/NZS2350.4 | Min 45 min | 135 min |
| Final Set Time | AS/NZS2350.4 | Max 360 min | 165 min |
| Soundness | AS/NZS2350.5 | Max 5 mm | 0 mm |
| Sulfuric Anhydride content (SO ₃) | AS2350.2 | Max 3.5 % | 3.0 % |
| Chloride Ion | BH-TM-0507 | Max 0.10 % | 0.022 % |

Other Properties

| | | | |
|--------------------------------|--------------|-----|------------------------|
| SiO ₂ | AS2350.2 | N/R | 19.7 % |
| Al ₂ O ₃ | AS2350.2 | N/R | 5.4 % |
| Fe ₂ O ₃ | AS2350.2 | N/R | 2.9 % |
| CaO | AS2350.2 | N/R | 63.3 % |
| MgO | AS2350.2 | N/R | 1.4 % |
| Na ₂ O Equivalent | AS2350.2 | N/R | 0.6 % |
| Loss on Ignition | AS2350.2 | N/R | 2.6 % |
| Fineness Index | AS/NZS2350.8 | N/R | 355 m ² /kg |
| Normal Consistency | AS/NZS2350.3 | N/R | 29.3 % |

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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 GP Cement.

N/R = No Requirement



Accredited for compliance with ISO/IEC 17025 - Testing.

Approved Signatory

M. Wythe

Issue Date: 11/05/2023