

CERTIFICATE OF ANALYSIS

CERTIFICATE No. 0039-19
TEST CERTIFICATE FOR: GP Portland Cement
PRODUCED AT: Sunstate Cement Ltd, Port of Brisbane
SAMPLE IDENTIFICATION: Spot Despatch Sample sample A6P-002195 sampled on 16/1/2019
SAMPLE TESTED AT: Sunstate Cement Ltd, Port of Brisbane

| SPECIFIED PROPERTY | TEST METHOD | AS3972 REQUIREMENTS | | RESULT |
|--|----------------------|---------------------|----------|----------|
| Compressive strength | AS2350.11, AS2350.12 | | | |
| 3 day | | | | 38.4 MPa |
| 7 day | | Minimum | 35 MPa | 45.0 MPa |
| 28 day | | Minimum | 45 MPa | 63.6 MPa |
| Setting time | AS2350.4 | | | |
| Initial | | Minimum | 45 mins | 105 mins |
| Final | | Maximum | 360 mins | 180 mins |
| Soundness | AS2350.5 | Maximum | 5 mm | 0 mm |
| Sulphuric anhydride (SO ₃) | In House | Maximum | 3.5 % | 2.8 % |
| Chloride | AS3583.13 | Maximum | 0.1 % | 0.010 % |

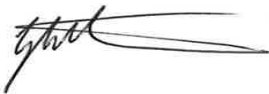
| REPORTABLE PROPERTY | TEST METHOD | | | RESULT |
|------------------------------------|-------------|--|--|------------------------|
| Loss on ignition | AS2350.2 | | | 3.4 % |
| Fineness | AS2350.8 | | | 375 m ² /kg |
| Total Alkali (Na ₂ Oeq) | AS2350.2 | | | 0.5 % |

| OTHER PROPERTIES | TEST METHOD | | | RESULT |
|--------------------|-------------|--|--|--------|
| Normal Consistency | In House | | | 28.7 % |

SAMPLING PROCEDURE:

- The results of the above tests relate only to the sample as described above.
- Total Alkali determined at Australian Laboratory Services by ICP -AES using ME -ICP 91, Corporate Accreditation No 825, Corporate Site 818.

REMARKS:



G Santaguiliana
Approved Signatory
19-Mar-2019

