

CERTIFICATE OF ANALYSIS

CERTIFICATE No. 0003-19

TEST CERTIFICATE FOR: Type Milled Slag

PRODUCED AT: Sunstate Cement Ltd, Port of Brisbane

SAMPLE IDENTIFICATION: Monthly Composite for the month of December 18

MATERIAL SOURCE: Nippon Steel Corporation

POINT OF SAMPLING: Final product air slide, Sunstate Cement Ltd, Port of Brisbane

SAMPLE TESTED AT: Sunstate Cement Ltd, Port of Brisbane

SAMPLE IDENTIFICATION: T6M-000114



NATA accredited laboratory
 Laboratory Number: 2191
 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. This document shall not
 be reproduced except in full.

SPECIFIED PROPERTY	TEST METHOD	AS3582.1 REQUIREMENTS		RESULT
Fineness	AS 3583.1			97 %
Insoluble residue	AS 3583.14			0.1 %
Loss on ignition	AS 3583.3			0.7 %
SO ₃	Inhouse			3.2 %
Chemical Properties				
Sulfide sulfur (S)	AS 3583.7	Maximum	1.5 %	0.7 %
Magnesia (MgO)	AS 2350.2	Maximum	15 %	6.9 %
Alumina (Al ₂ O ₃)	AS 2350.2	Maximum	18 %	12.7 %
Total Iron (FeO)	AS 2350.2			0.4 %
Manganese (MnO)	AS 2350.2			0.3 %
Chloride	AS3583.13	Maximum	0.1 %	0.015 %
Total Alkali	AS2350.2			0.5 %
Avalible Alkali	AS3583.12			0.1 %
Relative Density	AS3583.5			2.8 g/cm ³
Relative Water	AS3583.6			103 %
Relative Strength	AS3583.6			87.3 %

SAMPLING PROCEDURE: Slag samples obtained according to the requirements of AS2349

REMARKS:

- 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.
- XRF Analytical results determined at Australian Laboratory Services by XRF using ME -XRF 26,
 Corporate Accreditation No 825, Corporate Site 818.
- Available alkali determined by: Boral Material Technical Services Accreditation No 547.

G Santaguiliana
 Approved Signatory
 20-Mar-2019