

**Boral Construction Materials
Materials Technical Services**Unit 4, 3-5 Gibbon Road
Baulkham Hills NSW 2153 Australia

PO Box 400, Winston Hills NSW 2153

T +61 (02) 9624 9900

boral.com.au**TEST REPORT**

CLIENT: XYPEX AUSTRALIA

FILE NO: 256/23

ADDRESS: 190 Toongabbie Road, Girraween, NSW 2145

REQUEST NO: 109201

LAB. SAMPLE NO: 294331

SOURCE OF SAMPLE: Xypex

DATE RECEIVED: 21/11/2023

SAMPLE IDENTIFICATION: Ecotec Silica Fume -2023-SA-0309- JUNE 2023

IDENTIFICATION OF CEMENT USED: Boral Cement SL Berrima – Ref. 2022

TEST METHOD: AS 3583: Methods of test for supplementary cementitious materials for use with Portland Cement

PROPERTY	DATE TESTED	RESULT	TEST METHOD	AS 3582.3 SPEC.
Relative density	04/12/2023	2.22	AS 3583.5	
Relative water requirement	07/12/2023	110%	AS 3583.6	
Relative strength 7days (accelerated)	14/12/2023	99%	AS 3583.6	
Moisture content	29/11/2023	0.8%	AS 3583.2	Max. 3.0%
Loss on ignition	29/11/2023	3.2%	AS 3583.3	Max. 6.0%

Note:

- Sample was provided by the client and tested as received.

Josh Freake (joshuaf@xypex.com.au), Mat. File, File

Approved Signatory

Sam El-Hamawi

Date

18/12/23

Serial No. CEM109201.SE.1



TEST REPORT

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IDENTIFICATION OF CEMENT USED: Boral Cement SL Berrima – Ref. 2022

TEST METHOD: ASTM C1240 – Standard Specification for Silica Fume Used in Cementitious Mixtures

ASTM C1240 Part 16 - Accelerated Pozzolanic Strength Activity Index with Portland Cement

Date Cast: 04/12/2023

Date Crushed: 11/12/2023 @ 7 Days

Results: Accelerated Pozzolanic Strength Activity Index:
Control Mix Strength:
Test Mix Strength:

115% @ 7 Days
32.5 MPa
37.4 MPa

Note:

Test mix used 242 mls of water and 2.3 grams of Dry Water Reducer (Sikament NN) to obtain a flow of **106%**.

Note:

- Sample was provided by the client and tested as received.

Josh Freake (joshuaf@xypex.com.au), Mat. File, File

Approved Signatory

Sam El-Hamawi

Date

18/12/23

Serial No. CEM109201.SE.2





Report Template - Rev. (3) Jul 2021 Authorised by M. A.

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SAMPLE IDENTIFICATION: Ecotec Silica Fume-2023-SA-0309-JUNE 2023

PROPERTY	DATE TESTED	RESULT	TEST METHOD
Bulk Density	29/11/2023	763 Kg/m ³	AS3582.3 – Clause 7.1.7

Notes:

- Sample was provided by the client and tested as received.
- Test results in this Test Report relate only to the samples tested.

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Sam El-Hamawi
18/12/2023



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TEST REPORT

CLIENT: XYPEX AUSTRALIA
190 Toongabbie Road, Girraween 2145.

FILE No:256/23

PROJECT: Testing of Silica Fume Samples

REQUEST No: 109201

TEST PROCEDURE: AS 3583.13 – Determination of Chloride Ion content
AS 3583.8 – Determination of Sulfuric Anhydride content

Laboratory Sample No.: 294331
Date Sampled: June'2023
Date Received: 21/11/2023
Date Tested : 19/12/2023
Sample Description: Ecotec Silica Fume
June'23

TEST RESULTS:

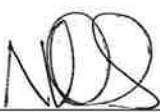
Chloride as Cl⁻ (%) 0.002
Sulphate as SO₃ (%) 0.7

Note:

- Sample was provided by the Client and tested as received.

Josh Freake, Mat. File, File.



Approved Signatory  Nanthini Selvadurai
Date 20-12-23 Serial No. CHEM109201.NS.1

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190 Toongabbie Road Girraween, NSW 2145.

FILE No.:256/23

PROJECT: Testing of Silica Fume Samples.

REQUEST No.: 109201

TEST PROCEDURE:

AS 3583.12 – 1991 – Determination of Available Alkali

Laboratory Sample No.: 294331
Date Sampled: June'23
Date Received: 21/11/2023
Date Tested: 20/12/2023
Sample Description: Ecotec Silica Fume
June'2023
Field No.: 1

TEST RESULTS:


Sodium as Na₂O (%) < 0.01
Potassium as K₂O (%) < 0.01
Available Alkali (%) < 0.1

Available Alkali (%) = Na₂O (%) + (0.658 x K₂O %)

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Josh Freake, Mat. File, File.



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190 Toongabbie Road, Girraween, NSW 2145.

FILE No: 256/23

PROJECT: Testing of Silica Fume Samples.

REQUEST No: 109201

TEST PROCEDURE: Boral In House Method 7 – Based on AS2350.2 using XRF.

Laboratory Sample No.: 294331
Date Sampled: June'23
Date Received: 21/11/2023
Date Tested: 29/11/2023
Sample Description: Ecotec Silica Fume June'23
Field No.: 1

TEST RESULTS

Silicon as SiO ₂ (%)	95.0
Potassium as K ₂ O (%)	0.38
Sodium as Na ₂ O (%)	0.09
Total Alkali content as Na ₂ O equiv. (%)	0.3

Note:

- sodium equivalent is calculated using the following formula: (%Na₂O + 0.658 x %K₂O)
- Sample was provided by the Client
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Nanthini Selvadurai
20th December 2023.

Josh Freake, Mat. File, File.