



MATERIALS TECHNICAL SERVICES  
BORAL RESOURCES (NSW) PTY LTD  
ABN 51 000 756 507  
Unit 4, 3-5 Gibbon Road  
Baulkham Hills NSW 2153 Australia  
PO Box 400, Winston Hills NSW 2153  
Telephone 61 2 9024 9900  
Facsimile 61 2 9624 9999

**TEST REPORT**

**CLIENT: XYPEX AUSTRALIA**  
Address: 9/177 Arthur Street Homebush West NSW 2140

**FILE NO: 256/10**

**REQUEST NO.: 38613**

**LAB. SAMPLE NO: 104441**

**SOURCE OF SAMPLE: Unknown**

**SAMPLE IDENTIFICATION: Ecotec Silica Fume –Monthly Sample for March 2010**

**TEST METHOD: AS3583: Methods of test for supplementary cementitious materials for use with Portland Cement**

PROPERTY	DATE TESTED	RESULT	TEST METHOD	AS3582 SPEC.
Moisture content	02-06-10	0.9 %	AS3583.2	Max. 3.0%
Loss on ignition	02-06-10	3.6 %	AS3583.3	Max. 6.0%
Relative Density	02-06-10	2.26	AS3583.5	

Sample submitted by the client.

Daniel Rowley, Mat. File, File

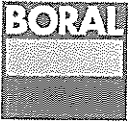


Approved Signatory *[Signature]*  
Date 15/06/2010 Serial No. 87732

Safwan Fawal

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TEST REPORT

CLIENT: XYPEX AUSTRALIA  
Address: 9/177 Arthur Street Homebush West NSW 2140

FILE NO: 256/10

SOURCE OF SAMPLE: Unknown

LAB SAMPLE NO: 104441

REQUEST NO.: 38613

SAMPLE IDENTIFICATION: Ecotec Silica Fume – Monthly Sample for March 2010

IDENTIFICATION OF CEMENT USED: BCSC GP Cement – ID # 45379

TEST METHOD: ASTM C-1240-04 Use of Silica Fume as a Mineral Admixture in Hydraulic-Cement Concrete, Mortar & Grout

Accelerated Pozzolanic Strength Activity Index With Portland Cement - ASTM C1240-04

Date Cast: 02-06-10 Date Crushed: 09-06-10 @ 7 Days

<u>Results:</u>	Accelerated Pozzolanic Strength Activity Index:	107 % @ 7 Days
	Control Mix Strength:	36.7 MPa
	Test Mix Strength:	39.2 MPa

Note:

Test mix used 242 mls of water and 6.1 grams of Water Reducer (Rheobuild 1000 from BASF) to obtain a flow of 100%.

Daniel Rowley, Mat. File, File

Muans Abdulnebe



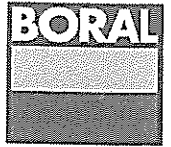
Approved Signatory \_\_\_\_\_

Date 09-07-10 Serial No. 87733

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TEST REPORT

CLIENT: XYPEX AUSTRALIA  
Address: 9/177 Arthur Street Homebush West NSW 2140

FILE NO: 256/10

REQUEST NO.: 38613

LAB. SAMPLE NO: 104441

SOURCE OF SAMPLE: Unknown

SAMPLE IDENTIFICATION: Ecotec Silica Fume -Monthly Sample for March 2010

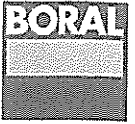
Bulk Density - AS3582.3.6.5

Result: 646 Kg/m<sup>3</sup>

A handwritten signature in black ink, appearing to read "Tatiana Lysova". The signature is stylized with a long horizontal stroke extending to the left.

Tatiana Lysova  
15-06-2010

Daniel Rowley, Mat. File, File



MATERIALS TECHNICAL SERVICES  
BORAL RESOURCES (NSW) PTY LTD  
ABN 61 050 758 507

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### Test Report

CLIENT: XYPEX AUSTRALIA  
9/177 Arthur Street, Homebush west, NSW 2140.

FILE No.:256/10

PROJECT: Testing of Silica Fume Samples.

REQUEST No.: 38613

#### **TEST PROCEDURE: Boral Chemical Method 2 – Determination of metal oxides by Lithium Meta Borate Fusion and analysed using ICP**

Laboratory Sample No.:	104441	104442	104443
Date Sampled:	15/03/10	14/04/10	17/05/10
Date Received:	28/05/10	28/05/10	28/05/10
Sample Description:	Ecotec Silica Fume - Monthly March'10.	Ecotec Silica Fume - Monthly April'10.	Ecotec Silica Fume - Monthly May'10.
Field No.:	1	2	3

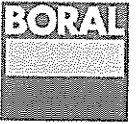
#### **TEST RESULTS**

Silicon as SiO <sub>2</sub> (%)	98.2	86.4	87.1
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Sample submitted by the client.

*Nanthini*  
Nanthini. Selvadurai  
Analytical Chemist  
09<sup>th</sup> July 2010

D.Rowley, File.



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Test Report

CLIENT: XYPEX AUSTRALIA  
9/177 Arthur Street, Homebush west, NSW 2140.

FILE No.:256/10

PROJECT: Testing of Silica Fume Samples.

REQUEST No.: 38613

TEST PROCEDURE: AS3583.13 – Determination of Chloride Ion Content  
AS3583.8 – Determination of Sulfuric Anhydride content

Laboratory Sample No.:	104441	104442	104443
Date Sampled:	15/03/10	14/04/10	17/05/10
Date Received:	28/05/10	28/05/10	28/05/10
Sample Description:	Ecotec Silica Fume - Monthly March'10	Ecotec Silica Fume - Monthly April'10	Ecotec Silica Fume - Monthly May'10
Field No.:	1	2	3

TEST RESULTS

Chloride as Cl <sup>-</sup> (%)	0.120	0.088	0.121
Sulphate as SO <sub>3</sub> (%)	0.4	0.5	0.5

Samples submitted by the Client.

D.Rowley, File.

Nanthini. Selvadurai



Approved Signatory Nanthini S  
Date 12-07-10 Serial No. 87731

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PO Box 400, Winston Hills NSW 2153  
Telephone 61 2 9624 9900  
Facsimile 61 2 9624 9999

**Test Report**

CLIENT: XYPEX AUSTRALIA  
9/177 Arthur Street, Homebush west, NSW 2140.

FILE No.: 256/10

PROJECT: Testing of Silica Fume Samples.

REQUEST No.: 38613

**TEST PROCEDURE:**

AS3583.12 – 1991 – Determination of Available Alkali

Laboratory Sample No.:	104441	104442	104443
Date Sampled:	15/03/10	14/04/10	17/05/10
Date Received:	28/05/10	28/05/10	28/05/10
Sample Description:	Ecotec Silica Fume - Monthly March'10.	Ecotec Silica Fume - Monthly April'10.	Ecotec Silica Fume - Monthly May'10.
Field No.:	1	2	3

**TEST RESULTS**

Sodium as Na <sub>2</sub> O (%)	0.13	0.10	0.12
Potassium as K <sub>2</sub> O (%)	0.12	0.13	0.11
Available Alkali (%)	0.2	0.2	0.2

Available Alkali (%) = Na<sub>2</sub>O (%) + (0.658 x K<sub>2</sub>O %)

Samples submitted by the Client.

D.Rowley, File.

Nanthini.Selvadurai

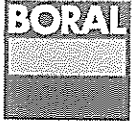
Approved Signatory Nall.S

Date 12-07-10 Serial No. 87730



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Number: 9968



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BORAL RESOURCES (NSW) PTY LTD  
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Baulkham Hills NSW 2153 Australia  
PO Box 400, Winston Hills NSW 2153  
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Facsimile 61 2 9624 9999

**TEST REPORT**

**CLIENT:** XYPEX AUSTRALIA  
Address: 9/177 Arthur Street Homebush West NSW 2140

**FILE NO:** 256/10

**REQUEST NO.:** 38613

**LAB. SAMPLE NO:** 104442

**SOURCE OF SAMPLE:** Unknown

**SAMPLE IDENTIFICATION:** Ecotec Silica Fume –Monthly Sample for April 2010

**TEST METHOD:** AS3583: Methods of test for supplementary cementitious materials for use with Portland Cement

PROPERTY	DATE TESTED	RESULT	TEST METHOD	AS3582 SPEC.
Moisture content	02-06-10	0.6 %	AS3583.2	Max. 3.0%
Loss on ignition	02-06-10	2.8 %	AS3583.3	Max. 6.0%
Relative Density	02-06-10	2.23	AS3583.5	

- Sample submitted by the client and tested as received

Daniel Rowley, Mat. File, File

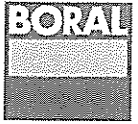


Approved Signatory *Safwan Fawal*  
Date 15/06/2010 Serial No. 87734

Safwan Fawal

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TEST REPORT

CLIENT: XYPEX AUSTRALIA  
Address: 9/177 Arthur Street Homebush West NSW 2140

FILE NO: 256/10

SOURCE OF SAMPLE: Unknown

LAB SAMPLE NO: 104442

REQUEST NO.: 38613

SAMPLE IDENTIFICATION: Ecotec Silica Fume – Monthly Sample for April 2010

IDENTIFICATION OF CEMENT USED: BCSC GP Cement – ID # 45379

TEST METHOD: ASTM C-1240-04 Use of Silica Fume as a Mineral Admixture in Hydraulic-Cement Concrete, Mortar & Grout

Accelerated Pozzolanic Strength Activity Index With Portland Cement - ASTM C1240-04

Date Cast: 02-06-10 Date Crushed: 09-06-10 @ 7 Days

<u>Results:</u>	Accelerated Pozzolanic Strength Activity Index:	113 % @ 7 Days
	Control Mix Strength:	36.7 MPa
	Test Mix Strength:	41.4 MPa

Note:

Test mix used 242 mls of water and 6.6 grams of Water Reducer (Rheobuild 1000 from BASF) to obtain a flow of 105%.

Daniel Rowley, Mat. File, File

Muans Abdulnebe



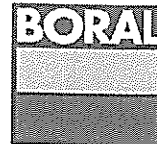
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Date 09-07-10 Serial No. 87735

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TEST REPORT

CLIENT: XYPEX AUSTRALIA  
Address: 9/177 Arthur Street Homebush West NSW 2140

FILE NO: 256/10

REQUEST NO.: 38613

LAB. SAMPLE NO: 104442

SOURCE OF SAMPLE: Unknown

SAMPLE IDENTIFICATION: Ecotec Silica Fume -Monthly Sample for April 2010

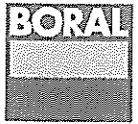
Bulk Density - AS3582.3.6.5

Result: 646 Kg/m<sup>3</sup>

A handwritten signature in black ink, appearing to read "T Lysova", with a horizontal line drawn through the middle of the signature.

Tatiana Lysova  
15-06-2010

Daniel Rowley, Mat. File, File



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**TEST REPORT**

CLIENT: XYPEX AUSTRALIA  
Address: 9/177 Arthur Street Homebush West NSW 2140

FILE NO: 256/10

REQUEST NO.: 38613

LAB. SAMPLE NO: 104443

SOURCE OF SAMPLE: Unknown

SAMPLE IDENTIFICATION: Ecotec Silica Fume –Monthly Sample for May 2010

TEST METHOD: AS3583: Methods of test for supplementary cementitious materials for use with Portland Cement

PROPERTY	DATE TESTED	RESULT	TEST METHOD	AS3582 SPEC.
Moisture content	02-06-10	0.8 %	AS3583.2	Max. 3.0%
Loss on ignition	02-06-10	3.0 %	AS3583.3	Max. 6.0%
Relative Density	02-06-10	2.28	AS3583.5	

- Sample submitted by the client and tested as received

Daniel Rowley, Mat. File, File



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Approved Signatory Safwan Fawal  
Date 15/06/2010 Serial No. 87736

Safwan Fawal

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