



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 9624 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

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

Results:	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/m³

A handwritten signature in black ink, appearing to read "T Lysova", 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 61 090 758 507

Unit 4, 3-5 Gibbon Road
Baulkham Hills NSW 2153 Australia
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: 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 ₂ (%)	93.2	86.4	87.1
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Sample submitted by the client.

Nanthini
Nanthini. Selvadurai
Analytical Chemist
09th 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^- (%)	0.120	0.088	0.121
Sulphate as SO_3 (%)	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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MATERIALS TECHNICAL SERVICES
BORAL RESOURCES (NSW) PTY LTD
ABN 51 000 756 607

Unit 4, 3-5 Gibbon Road
Baulkham Hills NSW 2153 Australia
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 ₂ O (%)	0.13	0.10	0.12
Potassium as K ₂ O (%)	0.12	0.13	0.11
Available Alkali (%)	0.2	0.2	0.2

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

Samples submitted by the Client.

D.Rowley, File.



Approved Signatory

Nall. S

Nanthini.Selvadurai

Date 12-07-10

Serial No. 87730

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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

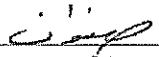
TEST METHOD: AS3583: Methods of test for supplementary cementitious materials for use with Portland Cement

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 
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

Results:	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

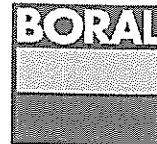


Approved Signatory

Date 09-07-10 Serial No. 87735

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TEST REPORT

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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/m³

A handwritten signature in black ink, appearing to read "Tatiana Lysova".

Tatiana Lysova
15-06-2010

Daniel Rowley, Mat. File, File

MATERIALS TECHNICAL SERVICES
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Telephone 61 2 9624 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: 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



Approved Signatory

Date 15/06/2010

Serial No.

87736

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