



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

SOURCE OF SAMPLE: Unknown

LAB SAMPLE NO: 108292

REQUEST NO.: 40121

SAMPLE IDENTIFICATION: Ecotec Silica Fume – Monthly Sample for June(2) 2010

IDENTIFICATION OF CEMENT USED: BCSC GP Cement – ID # 64514

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: 30-09-10

Date Crushed: 07-10-10 @ 7 Days

Results: Accelerated Pozzolanic Strength Activity Index: 106 % @ 7 Days
Control Mix Strength: 40.8 MPa
Test Mix Strength: 43.2 MPa

Note:

Test mix used 242 mls of water and 6.3 grams of Water Reducer (Rheobuild 1000 from BASF) to obtain a flow of 114%.

Bulk Density - AS3582.3.6.5

Result: 659 Kg/m³

Tatiana Lysova
13/10/2010

Daniel Rowley, Mat. File, File



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FILE NO: 256/10

REQUEST NO.: 40121

LAB. SAMPLE NO: 108292

SOURCE OF SAMPLE: Unknown

SAMPLE IDENTIFICATION: Ecotec Silica Fume –Monthly Sample for June(2) 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	30-09-10	1.1 %	AS3583.2	Max. 3.0%
Loss on ignition	30-09-10	2.7 %	AS3583.3	Max. 6.0%
Relative Density	30-09-10	2.24	AS3583.5	

- Sample submitted by the client and tested as received

Daniel Rowley, Mat. File, File

Safwan Fawal



Approved Signatory [Signature]
Date 14/10/2010 Serial No. 91287

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NATA Accredited Laboratory
Number: 547



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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.: 40121

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

Laboratory Sample No.: 108292
Date Sampled: unknown
Date Received: 13/09/10
Sample Description: Ecotec Silica Fume - Monthly
June (2) '10.
Field No.: 4

TEST RESULTS

Silicon as SiO₂ (%) 85.2

Sample submitted by the client.

Nanthini S
Nanthini S
Analytical Chemist
5th November 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.: 40121

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

Laboratory Sample No.: 108292
Date Sampled: unknown
Date Received: 13/09/10
Sample Description: Ecotec Silica Fume -
Monthly June (2)'10
Field No.: 4

TEST RESULTS

Chloride as Cl⁻ (%) 0.294
Sulphate as SO₃ (%) 0.70

Samples submitted by the Client.

D.Rowley,File.

Nanthini. Selvadurai



Approved Signatory Nanthini S
Date 20-10-10 Serial No. 91288

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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.: 40121

TEST PROCEDURE:

AS3583.12 – 1991 – Determination of Available Alkali

Laboratory Sample No.: 108292
Date Sampled: unknown
Date Received: 13/09/10
Sample Description: Ecotec Silica Fume - Monthly June (2)'10.
Field No.: 4

TEST RESULTS

Sodium as Na₂O (%) 0.27
Potassium as K₂O (%) 0.23
Available Alkali (%) 0.4

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

Samples submitted by the Client.

D.Rowley, File



Approved Signatory Nanthini.S Nanthini.Selvadurai
Date 20-10-10 Serial No. 91289

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NATA Accredited Laboratory
Number: 9968



Sample ID: 108292

Setup ID: None

Converted from:: L:/GEMINI/DATA/L192/3900/108292.MGD

File: L:\...3900\108292.DMT

Started: 8/11/2010 9:00:02AM

Completed: 8/11/2010 10:26:46AM

Report Time: 8/11/2010 2:00:09PM

Sample Mass: 0.2161 g

Equilibration Interval: 10 s

Sample Density: 1.000 g/cm³

Analysis Adsorptive: N2

Analysis Bath Temp.: 77.150 K

Thermal Correction: No

Warm Free Space: -0.6374 cm³ Measured

Low Pressure Dose: None

Automatic Degas: No

Summary Report

Surface Area

Single point surface area at $p/p^{\circ} = 0.200912066$: 21.2641 m²/g

BET Surface Area: 22.0469 m²/g

Langmuir Surface Area: 30.1007 m²/g

Sample ID: 108292

Setup ID: None

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Equilibration Interval: 10 s

Sample Density: 1.000 g/cm³

Analysis Adsorptive: N₂

Analysis Bath Temp.: 77.150 K

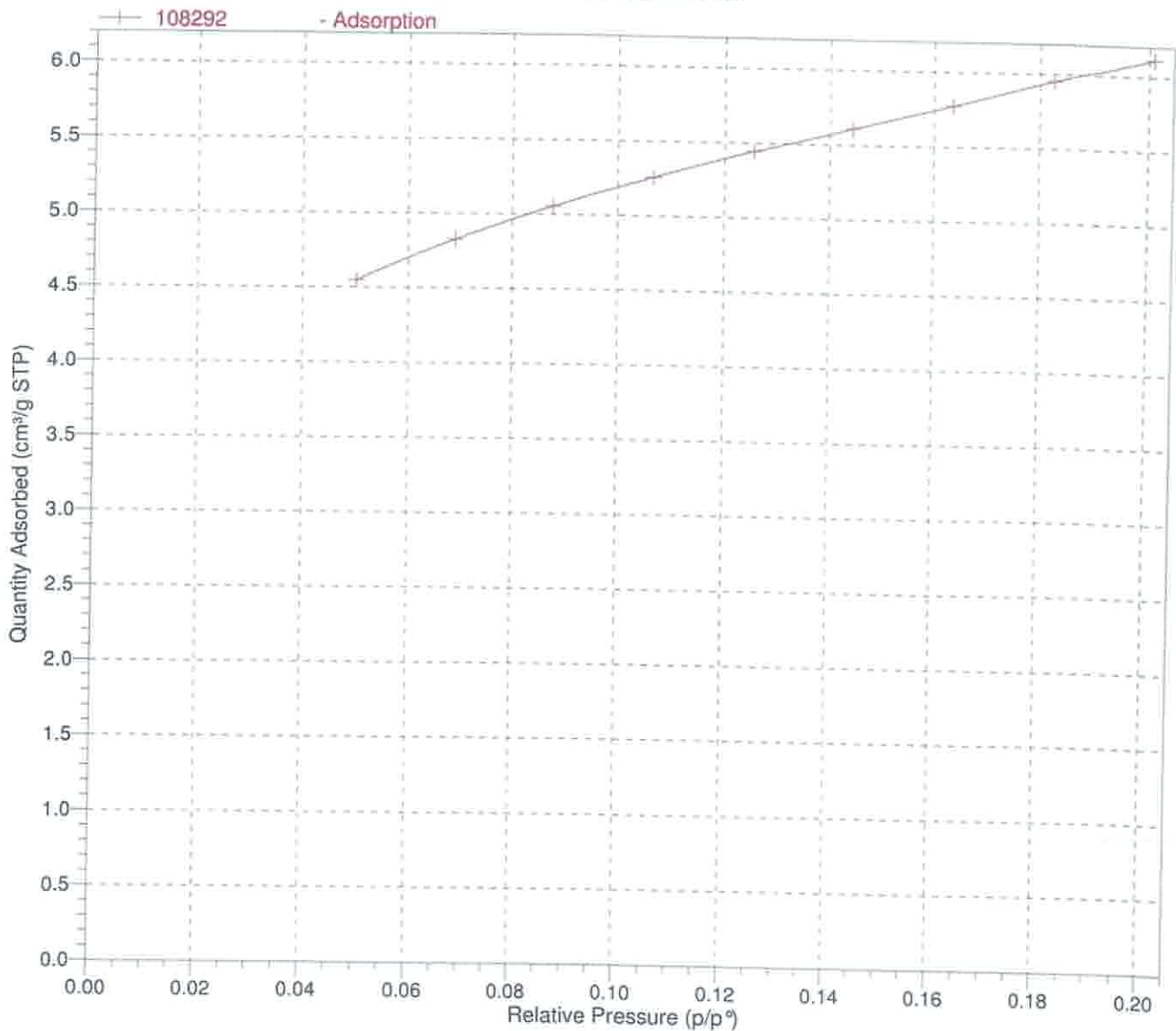
Thermal Correction: No

Warm Free Space: -0.6374 cm³ Measured

Low Pressure Dose: None

Automatic Degas: No

Isotherm Linear Plot



Sample ID: 108292

Setup ID: None

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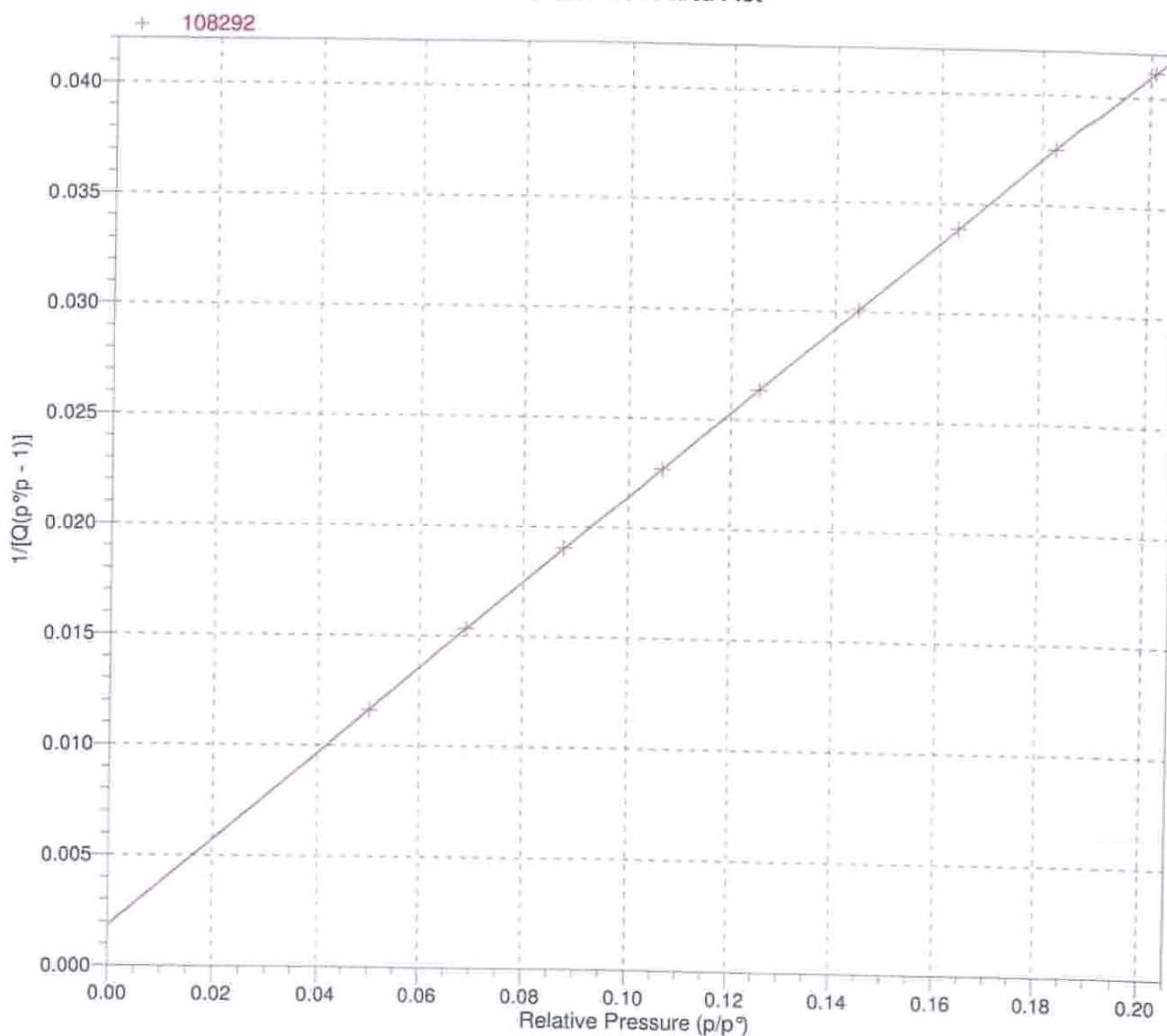
Thermal Correction: No

Warm Free Space: -0.6374 cm³ Measured

Low Pressure Dose: None

Automatic Degas: No

BET Surface Area Plot



Sample ID: 108292

Setup ID: None

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Sample Density: 1.000 g/cm³

Analysis Adsorptive: N2

Analysis Bath Temp.: 77.150 K

Thermal Correction: No

Warm Free Space: -0.6374 cm³ Measured

Low Pressure Dose: None

Automatic Degas: No

Langmuir Surface Area Plot

