



Caribbean Industrial Research Institute

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REPORT

Attn: Mr. Bimal Seebaran

Project Code: EC03826773/25

Client: ABEL BUILDING SOLUTIONS – ANSA MCAL ENTERPRISES LTD

Client Address: Depot Road Longdenville, Chaguanas


Report Title: Testing of 6" x 8" x 16" SP concrete blocks

Report No: 0032/26/01

Project Chief: Lisa Ramoutar


Author(s): Kareem Jennings

Reviewed By:


Neal Hassim, Civil Technologist

Date: 2025/10/17

Authorized By:


Lisa Ramoutar, Laboratory Manager

Date: 2025/10/17

Copy No: 1 of 1

Appendices: ☐

Report Version:

ORIGINAL ☒

RE-ISSUE ☐

AMENDED ☐

Introduction

The client submitted six (6) 6 inch concrete blocks labeled "140 x 190 x 390 SP" for water absorption and compressive strength determination. The samples were submitted on May 21, 2025 and were assigned CARIRI Identification numbers T251380 to T251385.

Approach

Guidelines given in *ASTM C140-18: Standard test method for sampling and testing of concrete masonry units* were used in the investigation.

Results

Testing period: September 30 to October 09, 2025.

Test results are presented in Tables 1 and 2.

Table 1: Compressive strength results of 6 inch concrete blocks

CARIRI ID	Client ID	Avg. overall dimensions LxBxH (mm)	Net cross-sectional area (mm ²)	Load (N)	Net area compressive strength (N/mm ²)	Requirements of ASTM C90-16a
T251380	140x190x390 SP	390.0×140.0×190.0	39 300	809 950	20.6	Min. net area compressive strength
T251381		392.5×140.0×190.0	39 500	829 500	21.0	Average of 3 units - 13.8 N/mm ²
T251382		392.5×140.0×190.0	39 750	646 100	16.3	Individual unit - 12.4 N/mm ²
			Average	19.3		

Date tested: October 09, 2025

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Table 2: Water absorption results of 6 inch concrete blocks

CARIRI ID	Client ID	Oven dry density (kg/m ³)	Water absorption (kg/m ³)	Requirements of ASTM C90-16a
T251383	140x190x390 SP	2151	118	Max. water absorption For conc. density >2000 kg/m ³ Average of 3 units - 208 kg/m ³ Individual unit – 240 kg/m ³
T251384		2149	116	
T251385		2151	118	
	Average	2150	117	

Date tested: September 30 to October 02, 2025

- Test Laboratory: CARIRI Materials Laboratory, Trincity West Industrial Estate, Macoya

END OF REPORT

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Attn: Mr. Bimal Seebaran

Project Code: EC03826773/25

Client: ABEL BUILDING SOLUTIONS – ANSA MCAL ENTERPRISES LTD

Client Address: Depot Road Longdenville, Chaguanas

Report Title: Testing of 6" x 8" x 16" Col 1600 concrete blocks

Report No: 0033/26/01

Project Chief: Lisa Ramoutar

Author(s): Kareem Jennings

Reviewed By:

Neal Hassim, Civil Technologist

Date: 2025/10/17

Authorized By:

Lisa Ramoutar, Laboratory Manager

Date: 2025/10/17

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Report Version:

ORIGINAL ☒

RE-ISSUE ☐

AMENDED ☐

Introduction

The client submitted six (6) 6 inch concrete blocks labeled "140 x 190 x 390 Col 1600" for water absorption and compressive strength determination. The samples were submitted on May 21, 2025 and were assigned CARIRI Identification numbers T251386 to T251391.

Approach

Guidelines given in *ASTM C140-18: Standard test method for sampling and testing of concrete masonry units* were used in the investigation.

Results

Testing period: September 30 to October 09, 2025.

Test results are presented in Tables 1 and 2.

Table 1: Compressive strength results of 6 inch concrete blocks

CARIRI ID	Client ID	Avg. overall dimensions LxBxH (mm)	Net cross-sectional area (mm ²)	Load (N)	Net area compressive strength (N/mm ²)	Requirements of ASTM C90-16a
T251386	140x190x390 Col 1600	390.0×140.0×187.5	41 100	765 000	18.6	Min. net area compressive strength Average of 3 units - 13.8 N/mm ² Individual unit - 12.4 N/mm ²
T251387		390.0×140.0×187.5	39 150	787 050	20.1	
T251388		390.0×140.0×187.5	41 050	779 850	19.0	
			Average	19.2		

Date tested: October 09, 2025

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Table 2: Water absorption results of 6 inch concrete blocks

CARIRI ID	Client ID	Oven dry density (kg/m ³)	Water absorption (kg/m ³)	Requirements of ASTM C90-16a
T251389	140x190x390 Col 1600	2179	120	Max. water absorption For conc. density >2000 kg/m ³ Average of 3 units - 208 kg/m ³ Individual unit – 240 kg/m ³
T251390		2188	111	
T251391		2188	120	
	Average	2185	117	

Date tested: September 30 to October 02, 2025

- Test Laboratory: CARIRI Materials Laboratory, Trincity West Industrial Estate, Macoya

END OF REPORT

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