



Caribbean Industrial Research Institute

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## REPORT

**Attn:** Mr. Bimal Seebaran

**Project Code:** EC03826640/26

**Client:** ABEL BUILDING SOLUTIONS – ANSA MCAL ENTERPRISES LTD

**Client Address:** Depot Road Longdenville, Chaguanas

**Report Title:** Testing of 4" x 8" x 16" Col 1600 concrete blocks

**Report No:** 0716/26/01

**Project Chief:** Lisa Ramoutar

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**Reviewed By:**

Neal Hassim, Civil Technologist

**Date:** 2026/05/29

**Authorized By:**

Lisa Ramoutar, Laboratory Manager

**Date:** 2026/05/29

**Copy No: 1 of 1**

**Appendices:**

**Report Version:**

**ORIGINAL**

**RE-ISSUE**

**AMENDED**

## Introduction

The client submitted nine (9) 4 inch concrete blocks labeled "90 x 190 x 390 Col 1600" for water absorption and compressive strength determination. The samples were submitted on March 27, 2026 and were assigned CARIRI Identification numbers T260812 to T260820.

## 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: May 12 to 28, 2026.

Test results are presented in Tables 1 and 2.

Table 1: Compressive strength results of 4 inch concrete blocks

CARIRI ID	Client ID	Avg. overall dimensions LxBxH (mm)	Net cross-sectional area (mm <sup>2</sup> )	Load (N)	Net area compressive strength (N/mm <sup>2</sup> )	Requirements of ASTM C90-16a
T260812	90x190x390 Col 1600	390.0×90.0×187.5	22 250	368 950	16.6	<b>Min. net area compressive strength</b> Average of 3 units - 13.8 N/mm <sup>2</sup> Individual unit - 12.4 N/mm <sup>2</sup>
T260813		390.0×90.0×187.5	21 850	336 750	15.4	
T260814		390.0×90.0×187.5	22 250	304 200	13.7	
T260815		390.0×90.0×187.5	22 250	407 850	18.3	
T260816		390.0×90.0×190.0	22 250	479 300	21.5	
T260817		387.5×90.0×187.5	21 700	327 500	15.1	
				Average	16.8	

Date tested: May 25 to 28, 2026

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Table 2: Water absorption results of 4 inch concrete blocks

CARIRI ID	Client ID	Oven dry density (kg/m <sup>3</sup> )	Water absorption (kg/m <sup>3</sup> )	Requirements of ASTM C90-16a
T260818	90x190x390 Col 1600	2157	120	<b>Max. water absorption</b> For conc. density >2000 kg/m <sup>3</sup> Average of 3 units - 208 kg/m <sup>3</sup> Individual unit – 240 kg/m <sup>3</sup>
T260819		2155	119	
T260820		2143	119	
	Average	2152	119	

Date tested: May 12 to 15, 2026

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

**END OF REPORT**

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