



Caribbean Industrial Research Institute

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## REPORT

**Attn:** Mr. Bimal Seebaran

**Project Code:** EC03826713/23

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

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

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

**Report No:** 0967/23/01

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**Date:** 2023/06/28

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Lisa Ramoutar, Laboratory Manager

**Date:** 2023/06/28

**Copy No: 1 of 1**

**Appendices:**

**Report Version:**

**ORIGINAL**

**RE-ISSUE**

**AMENDED**

## Introduction

The client submitted six (6) 8 inch concrete blocks labeled “190 x 190 x 390 Columbia 1600” for water absorption and compressive strength determination. The samples were submitted on June 13, 2023 and were assigned CARIRI Identification numbers T231405 to T231410.

## 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: June 20 to 22, 2023.

Test results are presented in Tables 1 and 2.

Table 1: Compressive strength results of 8 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
T231405	190x190x390	391×190×188	36 754	1 055 841	28.7	<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>
T231406	Columbia 1600	389×190×188	36 236	982 543	27.1	
T231407		389×191×188	36 761	1 075 813	29.3	
				Average	28.4	

Date tested: June 21, 2023

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Table 2: Water absorption results of 8 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
T231408	190x190x390	2161	103	<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>
T231409	Columbia	2168	101	
T231410	1600	2172	104	
	Average	2167	103	

Date tested: June 20 to 22, 2023

**END OF REPORT**

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