



Caribbean Industrial Research Institute

Mailing Address: Tunapuna Post Office, Trinidad and Tobago  
Telephone: (868) 299-0210 Telefax: (868) 662-7177  
www.cariri.com Email: mail@cariri.com

## REPORT

**Attn:** Mr. Bimal Seebaran

**Project Code:** EC03826544/24

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

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


**Report Title:** Testing of 6" x 8" x 16" C1600 concrete blocks

**Report No:** 0399/24/01

**Project Chief:** Lisa Ramoutar

**Author(s):** Kareem Jennings and Vinesh Lall

**Reviewed By:**  **Date:** 2024/02/06  
Neal Hassim, Civil Technologist

**Authorized By:**  **Date:** 2024/02/06  
Lisa Ramoutar, Laboratory Manager

**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 C1600" for water absorption and compressive strength determination. The samples were submitted on November 20, 2023 and were assigned CARIRI Identification numbers T240312 to T240317.

## 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: December 11, 2023 to January 19, 2024.

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 <sup>2</sup> )	Load (N)	Net area compressive strength (N/mm <sup>2</sup> )	Requirements of ASTM C90-16a
T240312	140x190x390 C1600	387.5×140.0×190.0	30600	870400	28.4	<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>
T240313		390.0×140.0×190.0	30400	849600	27.9	
T240314		390.0×140.0×190.0	30400	851850	28.0	
				Average	28.1	

Date tested: January 19, 2024

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Table 2: Water absorption results of 6 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
T240315	140x190x390 C1600	2164	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>
T240316		2145	103	
T240317		2162	103	
	Average	2157	103	

Date tested: December 11 to 18, 2023

**END OF REPORT**

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