



Caribbean Industrial Research Institute

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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 4" x 8" x 16" C1600 concrete blocks


Report No: 0397/24/01

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Reviewed By: 
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Date: 2024/02/06

Authorized By: 
Lisa Ramoutar, Laboratory Manager

Date: 2024/02/06

Copy No: 1 of 1

Appendices:

Report Version:

ORIGINAL

RE-ISSUE

AMENDED

Introduction

The client submitted six (6) 4 inch concrete blocks labeled "90 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 T240300 to T240305.

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 4 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
T240300	90x190x390 C1600	390x90x190	22400	620450	27.7	Min. net area compressive strength Average of 3 units - 13.8 N/mm ² Individual unit - 12.4 N/mm ²
T240301		390x90x190	22100	613050	27.7	
T240302		390x90x190	22100	610850	27.6	
			Average		27.7	

Date tested: January 19, 2024

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Table 2: Water absorption results of 4 inch concrete blocks

CARIRI ID	Client ID	Oven dry density (kg/m ³)	Water absorption (kg/m ³)	Requirements of ASTM C90-16a
T240303	90x190x390 C1600	2143	119	Max. water absorption For conc. density >2000 kg/m ³ Average of 3 units - 208 kg/m ³ Individual unit – 240 kg/m ³
T240304		2155	119	
T240305		2153	129	
	Average	2150	123	

Date tested: December 11 to 18, 2023

END OF REPORT

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