



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 8" x 8" x 16" SPAC concrete blocks

**Report No:** 0401/24/01

**Project Chief:** Lisa Ramoutar

**Author(s):** Delroy John and Vinesh Lall

**Reviewed By:**

Neal Hassim, Civil Technologist

**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) 8 inch concrete blocks labeled "190 x 190 x 390 SPAC" for water absorption and compressive strength determination. The samples were submitted on November 20, 2023 and were assigned CARIRI Identification numbers T240318 to T240323.

## 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: January 04 to 19, 2024.

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
T240318	190x190x390 SPAC	390.0×190.0×195.0	39500	888500	22.5	<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>
T240319		390.0×190.0×192.5	38800	924250	23.8	
T240320		390.0×190.0×195.0	38800	742450	19.1	
				Average	21.8	

Date tested: January 19, 2024

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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
T240321	190x190x390 SPAC	2183	110	<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>
T240322		2146	122	
T240323		2155	119	
Average	2161	117		

Date tested: January 04 to 16, 2024

**END OF REPORT**

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