



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" SPAC concrete blocks

Report No: 0400/24/01

Project Chief: Lisa Ramoutar

Author(s): Kareem Jennings 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) 6 inch concrete blocks labeled "140 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 T240306 to T240311.

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 ²)	Load (N)	Net area compressive strength (N/mm ²)	Requirements of ASTM C90-16a
T240306	140x190x390 SPAC	390.0×140.0×190.0	32200	826800	25.8	Min. net area compressive strength Average of 3 units - 13.8 N/mm ² Individual unit - 12.4 N/mm ²
T240307		390.0×140.0×190.0	31600	759650	24.0	
T240308		390.0×140.0×190.0	33150	904250	27.3	
				Average	25.7	

Date tested: January 19, 2024

1. This report relates only to the specific item(s)/sample(s) which has been tested, analysed, or calibrated by CARIRI. It shall be used solely for informing the client of the results of this specific item(s)/sample(s) and not any other. Information contained herein, shall not be used for any other purposes including, but not limited to, Certification, Advertising, and Marketing.
 2. This report may not be reproduced other than in full, except with the prior written authorization from the Executive Management of CARIRI.
 3. Any Opinions and Interpretations expressed within are outside the scope of our Certification and/or Accreditation.

Table 2: Water absorption results of 6 inch concrete blocks

CARIRI ID	Client ID	Oven dry density (kg/m ³)	Water absorption (kg/m ³)	Requirements of ASTM C90-16a
T240309	140x190x390 SPAC	2164	115	Max. water absorption For conc. density >2000 kg/m ³ Average of 3 units - 208 kg/m ³ Individual unit – 240 kg/m ³
T240310		2164	115	
T240311		2180	107	
	Average	2169	112	

Date tested: December 11 to 18, 2023

END OF REPORT

1. This report relates only to the specific item(s)/sample(s) which has been tested, analysed, or calibrated by CARIRI. It shall be used solely for informing the client of the results of this specific item(s)/sample(s) and not any other. Information contained herein, shall not be used for any other purposes including, but not limited to, Certification, Advertising, and Marketing.
2. This report may not be reproduced other than in full, except with the prior written authorization from the Executive Management of CARIRI.
3. Any Opinions and Interpretations expressed within are outside the scope of our Certification and/or Accreditation.