



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: Churchill Roosevelt Highway, Golden Grove, Arouca

Report Title: Testing of 4 inch Solid Slabs

Report No: 1034/23/01


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Reviewed By: 

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Date: 2023/07/14

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Date: 2023/07/14

Copy No: 1 of 1 **Appendices:**

Report Version: **ORIGINAL** **RE-ISSUE** **AMENDED**

Introduction

The client submitted six (6) 4 inch Solid Slabs for determination of compressive strength and water absorption. The samples were submitted on June 13, 2023 and were assigned CARIRI Identification numbers T231435 to T231440.

Approach

Guidelines given in *ASTM C140-18a: Standard test method for sampling and testing of concrete masonry units* were used in the investigation. Sample requirements are extracted from *ASTM C55-11: Standard Specification for Concrete Building Brick*.

Results

Testing period: June 23 to 30, 2023

Test results are presented in Tables 1 and 2.

Table 1: Compressive strength results of 4 inch Solid Slabs

CARIRI ID	Avg. overall dimensions L x B x H (mm)	Net cross-sectional area (mm ²)	Load (N)	Net area compressive strength (N/mm ²)	Requirements of ASTM C55-11
T231435	196×134×94	25 284	1 167 300	46.2	Minimum Compressive Strength – Average of 3 units shall be 17.2 MPa (N/mm ²) and for any individual block shall be 13.8 MPa (N/mm ²)
T231436	197×132×94	25 413	1 179 900	46.4	
T231437	196×135×93	25 676	1 142 250	44.5	
			Average	45.7	

Table 2: Water absorption results of 4 inch Solid Slabs

CARIRI ID	Oven dry density (kg/m ³)	Water absorption (kg/m ³)	Requirements of ASTM C55-11
T231438	2191	101	Maximum Water absorption - For conc. density >2000 kg/m ³ Average of 3 units - 208 kg/m ³ Individual unit – 240 kg/m ³
T231439	2192	101	
T231440	2182	107	
Average	2188	103	

☐ Test Laboratory: CARIRI Materials Laboratory, Trincity West Industrial Estate, Macoya