



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 50 mm Patio Slabs

Report No: 1033/23/01

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Reviewed By:

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Date: 2023/07/14

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Date: 2023/07/14

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Appendices:

Report Version:

ORIGINAL

RE-ISSUE

AMENDED

Introduction

The client submitted six (6) 50 mm Patio Slabs for determination of compressive strength and water absorption. The samples were submitted on June 13, 2023 and were assigned CARIRI Identification numbers T231429 to T231434.

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 C936-16: Standard Specification for Solid Concrete Interlocking Paving Units*.

Results

Testing period: June 14 to 29, 2023

Test results are presented in Tables 1 and 2.

Table 1: Compressive strength results of 50 mm Patio 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 C936-16
T231429	193×134×53	24 704	1 327 450	53.7	Minimum Compressive Strength - Average of 3 units shall be 55 MPa (N/mm ²) For any individual block shall be 50 MPa (N/mm ²)
T231430	193×128×52	23 932	1 128 850	47.2	
T231431	194×135×52	25 415	1 184 250	46.6	
			Average	49.2	

Table 2: Water absorption results of 50 mm Patio Slabs

CARIRI ID	Oven dry density (kg/m ³)	Water absorption (%)	Requirements of ASTM C936-16
T231432	2111	5.5	Maximum Water absorption - Average of 3 units shall be 5% and for any individual unit shall be 7%
T231433	2106	5.7	
T231434	2089	5.7	
Average	2102	5.6	

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