



Caribbean Industrial Research Institute

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REPORT

Attn: Mr. Bimal Seebaran

Project Code: EC03826634/25

Client: ABEL BUILDING SOLUTIONS – ANSA MCAL ENTERPRISES LTD

Client Address: Depot Road Longdenville, Chaguanas

Report Title: Testing of 6" x 8" x 16" Col 1600 concrete blocks

Report No: 0862/25/01

Project Chief: Lisa Ramoutar

Author(s): Vinesh Lall and Adrian Cruickshank


Reviewed By:



Neal Hassim, Civil Technologist

Date: 2025/05/09

Authorized By:



Lisa Ramoutar, Laboratory Manager

Date: 2025/05/09

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 Col 1600" for water absorption and compressive strength determination. The samples were submitted on February 11, 2025 and were assigned CARIRI Identification numbers T250741 to T250746.

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: February 17 to May 07, 2025.

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 |
|-----------|-------------------------|---------------------------------------|--|----------|---|--|
| T250741 | 140x190x390 Col 1600 | 390.0×140.0×190.0 | 30 750 | 984 100 | 32.0 | Min. net area compressive strength Average of 3 units - 13.8 N/mm ² Individual unit - 12.4 N/mm ² |
| T250742 | | 390.0×140.0×190.0 | 30 750 | 881 450 | 28.7 | |
| T250743 | | 390.0×140.0×190.0 | 30 750 | 863 750 | 28.1 | |
| | | | | Average | 29.6 | |

Date tested: May 07, 2025

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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 |
|-----------|-------------------------|---------------------------------------|---------------------------------------|--|
| T250744 | 140x190x390 Col 1600 | 2136 | 110 | Max. water absorption For conc. density >2000 kg/m ³ Average of 3 units - 208 kg/m ³ Individual unit – 240 kg/m ³ |
| T250745 | | 2127 | 119 | |
| T250746 | | 2145 | 111 | |
| | Average | 2136 | 113 | |

Date tested: February 17 to 19, 2025

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

END OF REPORT

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