



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 190 x 190 x 390 Col 1600 concrete blocks

Report No: 0774/25/01

Project Chief: Lisa Ramoutar

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Reviewed By:



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Date: 2025/05/01

Authorized By:



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Date: 2025/05/01

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 Col 1600" for water absorption and compressive strength determination. The samples were submitted on February 11, 2025 and were assigned CARIRI Identification numbers T250747 to T250752.

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: April 07 to 30, 2025.

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 ²) | Load (N) | Net area compressive strength (N/mm ²) | Requirements of ASTM C90-16a |
|-----------|-------------------------|---------------------------------------|--|-----------|---|---|
| T250747 | 190x190x390 Col 1600 | 390.0×190.0×187.5 | 39 450 | 1 032 250 | 26.2 | Min. net area compressive strength |
| T250748 | | 392.5×192.5×190.0 | 40 250 | 1 131 350 | 28.1 | Average of 3 units - 13.8 N/mm ² |
| T250749 | | 390.0×192.5×190.0 | 38 900 | 1 153 450 | 29.7 | Individual unit - 12.4 N/mm ² |
| | | | | Average | 28.0 | |

Date tested: April 30, 2025

Table 2: Water absorption results of 8 inch concrete blocks

| CARIRI ID | Client ID | Oven dry density (kg/m ³) | Water absorption (kg/m ³) | Requirements of ASTM C90-16a |
|-----------|-------------------------|---------------------------------------|---------------------------------------|--|
| T250750 | 190x190x390 Col 1600 | 2148 | 123 | Max. water absorption For conc. density >2000 kg/m ³ Average of 3 units - 208 kg/m ³ Individual unit – 240 kg/m ³ |
| T250751 | | 2173 | 111 | |
| T250752 | | 2171 | 110 | |
| | | Average | 2164 | |

Date tested: April 07 to 10, 2025

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

END OF REPORT

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