



Caribbean Industrial Research Institute

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## REPORT

**Attn:** -

**Project Code:** EC03826716/23

**Client:** TRINIDAD AND TOBAGO BUREAU OF STANDARDS


**Client Address:** Century Drive, Trincity Industrial Estate

**Report Title:** Testing of 4 inch concrete blocks

**Report No:** 1008/23/01

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**Date:** 2023/08/15

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**Date:** 2023/08/15

**Copy No:** 1 of 1

**Appendices:**

**Report Version:** ORIGINAL

RE-ISSUE

AMENDED

## Introduction

The client submitted six (6) 4 inch concrete blocks for determination of parameters identified in Table 1. The samples were submitted on June 15, 2023 and were assigned CARIRI Identification numbers T231478 to T231483.

Table 1: Sample identification and tests requested

CARIRI ID	Client ID	Test
T231478 to T231480	B-4"-1 to B-4"-3	Dimensional checks
T231481 to T231483	B-4"-4 to B-4"-6	Surface finish

## 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: June 22, 2023.

Test results are presented in Tables 2 to 3.

Table 2: Dimensional check results of 4 inch concrete blocks

CARIRI ID	Client ID	Dimensions (mm)						Normalized Web Area (mm <sup>2</sup> /m <sup>2</sup> )
		Average Length	Average Breadth	Average Height	Average Shell Thickness	Average Web Thickness	Average Web Height	
T231478	B-4"-1	390.0	90.0	190.0	24.50	23.75	190.0	164 500
T231479	B-4"-2	390.0	90.0	190.0	24.50	24.00	190.0	166 000
T231480	B-4"-3	390.0	90.0	190.0	24.50	24.00	190.0	166 000
Average					24.50	24.00	190.0	165 500
Minimum requirements from ASTM C90-16a (4 inch)					19.00	19.00	-	45,140

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Table 3: Surface finish results

CARIRI ID	Client ID	Chips (>25.4mm)		Cracks (>0.5mm)		Imperfections visible from 20ft away	
		Yes	No	Yes	No	Yes	No
T231481	B-4"-4		✓		✓	✓	
T231482	B-4"-5		✓		✓		✓
T231483	B-4"-6		✓		✓		✓

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**END OF REPORT**

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