



DEPARTMENT OF CIVIL ENGINEERING

Mobile: 01819557964; PABX: 55167100 Ext. 7226  
http://brtc.ce.buet.ac.bd/#/home



STRENGTH OF MATERIALS LABORATORY

BRTC No. : 1103-03883 /CE/23-24; Dt: 22/10/2023  
Sent by : Assistant General Manager, Sales & Marketing, Maxcrete Ltd.  
Ref. No. : Letter; Dt: 22/10/2023  
Project : Not mentioned  
Sample : Autoclave Aerated Concrete (AAC) Block (600×200×200 mm)  
Test Specimen : Autoclave Aerated Concrete (AAC) Block  
Test : Compressive Strength (ASTM C1386)  
Date of Test : 28/10/2023

TEST REPORT

Sl. No.	Nominal Size	Specimen Height	Tested Specimen Area	Maximum Load	Crushing Strength	Average Crushing Strength	Mode of Failure
		(In)	(sq. in)	(lb)	(psi)		
1	600×200×200 mm	7.87	62.31	74,415	1,194	<b>1140 psi</b> (7.9 MPa) (80 kg/cm <sup>2</sup> )	-
2		7.91	61.85	66,097	1,069		-
3		7.83	60.76	70,144	1,154		-

Note: Samples were received in unsealed condition.

Countersigned by:

Dr. Hasib Mohammed Ahsan  
Professor  
Department of Civil Engineering  
BUET, Dhaka-1000, Bangladesh



Test Performed by:

15/11/2023  
Dr. Shameem Ahmed  
Professor  
Department of Civil Engineering  
BUET, Dhaka-1000, Bangladesh



**Important Notes:** Samples as supplied to us have been tested in our laboratory. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that samples are sent in a secure and sealed cover/packet/container under signature of the competent authority. In order to avoid fraudulent fabrication of test results, it is recommended that all test reports are collected by duly authorized person, and not by the Contractor/Supplier.



# BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)



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## STRENGTH OF MATERIALS LABORATORY


BRTC No. : 1103-00739 /CE/23-24; Dt: 17/9/2023  
Sent by : Assistant General Manager, Sales & Marketing, Maxcrete Ltd.  
Ref. No. : Letter; Dt: 17/9/2023  
Project : Not mentioned  
Sample : Autoclave Aerated Concrete (AAC) Block (600×200×120 mm)  
Test Specimen : Autoclave Aerated Concrete (AAC) Block  
Test : Dry Bulk Density (ASTM C1386)  
Date of Test : 24/09/2023 to 27/09/2023

### TEST REPORT

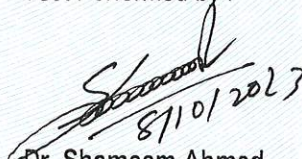
Sl. No.	Nominal Size of Block	Specimen Length	Specimen Width	Specimen Height	Specimen Weight	Dry Bulk Density	Average Dry Bulk Density
		(mm)	(mm)	(mm)	(gm)	(kg/cu.m)	(kg/cu.m)
1	600×200×120 mm	120.0	117.7	118.0	1,365	819	807
2		120.7	119.7	121.0	1,409	806	
3		119.0	118.5	118.0	1,322	794	

Note: Samples were received in unsealed condition.



  
Dr. Hasib Mohammed Ahsan  
Professor  
Department of Civil Engineering  
BUET, Dhaka-1000, Bangladesh

Test Performed by:

  
Dr. Shameem Ahmed  
Professor  
Department of Civil Engineering  
BUET, Dhaka-1000, Bangladesh



**Important Notes:** Samples as supplied to us have been tested in our laboratory. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that samples are sent in a secure and sealed cover/packet/container under signature of the competent authority. In order to avoid fraudulent fabrication of test results, it is recommended that all test reports are collected by duly authorized person, and not by the Contractor/Supplier.

BUETCE 0448977





Client : Engr. Abu Mohammad Samsudding  
Assistant General Manager, Sales & Marketing  
Maxcrete Limited  
RAOWA Complex, Level 11, VIP Road, Mohakhali, Dhaka- 1206

Client's Reference : Nil; Date: 08/10/2023

BRTC Reference : 1103-02556/MME/2023-24; Date: 08/10/2023

Subject : Test of Blocks

Sample Condition : Not Sealed

22 November 2023  
MME-0362/2023-24



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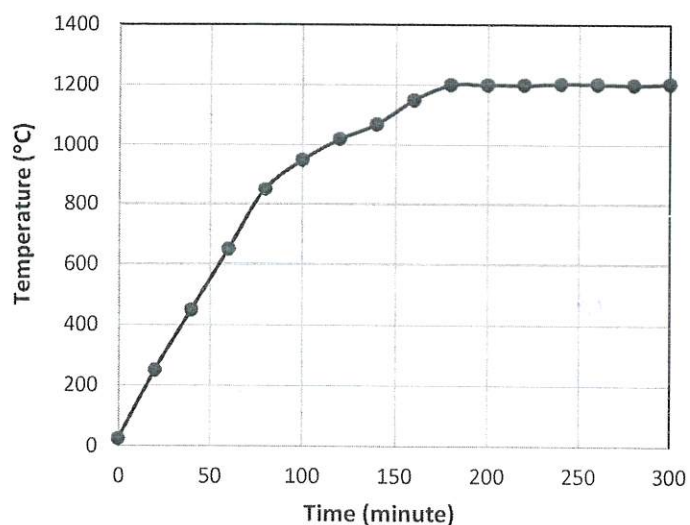
**Please Note:** The client supplied the sample and the result given herewith corresponds to the sample tested only. The Department of Materials and Metallurgical Engineering of BUET takes no responsibility regarding the misidentification, if any, of the sample.

## TEST REPORT

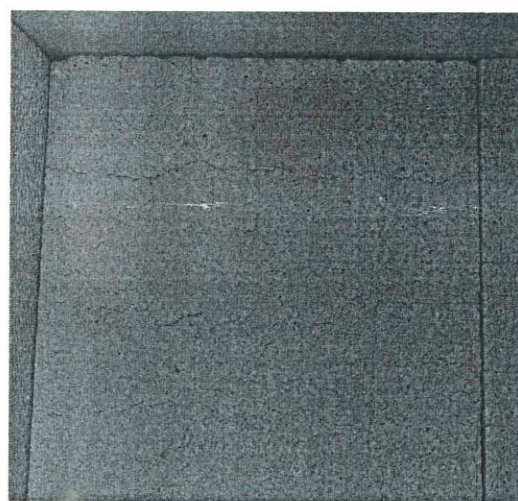
### Fire Endurance Test (ASTM E 119)

Sample Description	Wall Size	Wall Thickness	Test Temperature	Maximum Temperature Recorded	Test Duration
	mm <sup>2</sup>	mm	°C	°C	minute
Autoclaved Aerated Concrete Block Wall	1000 × 1000	200	As per Fig. 1	1200 ±5	300

Observations	Passage of Flame and Smoke	Maximum Temperature at Unexposed Side (°C)	Post Test
	Nil	55	The concrete block wall remained intact although blocks turned brownish and numerous cracks appeared at the exposed surface (Fig. 2).



**Fig. 1:** Furnace test temperature curve showing the temperature rise of the furnace with time during the test.



**Fig. 2:** Section of the block wall showing cracks in the concrete blocks.

*Rashid* 22/11/2023

Dr. A. K. M. Bazlur Rashid  
Professor and Head