

ASTM C140/C140M-20a Test Report
Sampling and Testing Concrete Masonry Units and Related Units

NCMA Job No: 21-314-11
Report Date: 7/30/2021

Client: Best Block
Address: 2088 FM 949
Alleyton, TX 78935

Testing Agency: National Concrete Masonry Association
Address: Research and Development Laboratory
13750 Sunrise Valley Drive
Herndon, VA 20171

Unit Specification: ASTM C55-17

Unit Description/Designation: 4x2-1/4x8 in. Utility Brick
ID: Normal Weight No. 11

Sampling Party: Best Block (Alleyton)
Date Samples Received: 6/3/2021

Summary of Test Results

Physical Property	ASTM C55-17 Required Value	ASTM C55-17 Tested Value
Net Compressive Strength	2,500 psi minimum	9,040 psi
Density	**** pcf maximum	135.4 pcf
Absorption	13 pcf maximum	6.7 pcf
Net Cross-Sectional Area	**** in ²	28.0 in ²
Maximum Variation from Specified Dimensions	0.125 in. maximum	0.062 in.

Individual Unit Results

Note: Specimens for compressive strength testing reduced in size to conform to specimen configuration requirements of ASTM C140/C140M-20a.

Reduced Compression Units	Specimen	Specimen	Specimen	Aspect Ratio	
	No.	Width in.	Height in.		Length in.
	#1	3.66	1.91	7.63	0.52
	#2	3.65	1.88	7.65	0.52
	#3	3.65	1.90	7.69	0.52
	Average	3.65	1.90	7.65	0.52

Specimen No.	Specimen Received Wt, W _f	Cross-Sectional Area * Net	Max. Load	Compressive Strength Net
	lb	in ²	lb	psi
#1	3.28	27.93	254,590	9,120
#2	3.24	27.89	263,440	9,440
#3	3.21	28.08	240,140	8,550
Average	3.24	27.97	252,723	9,040

* Net cross-sectional area calculated as the product of the length and the width of the units since units are solid.

Full Size Absorption Units	Specimen	Avg	Avg	Avg
	No.	Width in.	Height in.	Length in.
	#4	3.66	2.28	7.63
	#5	3.65	2.28	7.65
	#6	3.65	2.28	7.69
	Average	3.65	2.28	7.65

Date Tested:
6/11/2021

Specimen No.	Received Wt, WR	Immersed Wt, WI	Saturated Wt, WS	Oven-Dry Wt, WD	Absorp pcf	Density pcf	Net Volume ft ³	Percent Solid %
	lb	lb	lb	lb				
#4	4.75	2.74	4.89	4.66	6.7	135.1	0.0345	100.0
#5	4.76	2.75	4.89	4.66	6.6	135.7	0.0343	100.0
#6	4.77	2.75	4.90	4.67	6.7	135.4	0.0345	100.0
Average	4.76	2.74	4.89	4.66	6.7	135.4	0.0344	100.0

Date Tested:
6/14/2021
to
6/16/2021



Timothy Jones
Manager, Research and Development Laboratory



Jason J. Thompson
Vice President of Engineering