

**ASTM C140/C140M-17 Test Report**  
**Sampling and Testing Concrete Masonry Units and Related Units**

NCMA Job No: 17-362-2B  
Report Date: 8/21/2017

Client: Saturn Materials  
Address: 350 Yorkville Park Square  
Columbus, MS 39702

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

Unit Specification: ASTM C1634-16

Unit Description/Designation: 4 x 8 x 24 inch Concrete Masonry Unit

Sampling Party: Saturn Materials

Date Samples Received: 6/8/2017

**Summary of Test Results**

Physical Property	ASTM C1634-16		Tested Value	
	Required Value			
Net Compressive Strength	2500	psi minimum	4750	psi
Gross Compressive Strength	***		3630	psi
Density	****		121.0	pcf
Absorption	15	pcf maximum	6.9	pcf
Net Cross-Sectional Area	****	in <sup>2</sup>	30.8	in <sup>2</sup>
Minimum Edge Distance	0.75	in. minimum		in.
Maximum Variation from Specified Dimensions	0.125	in. maximum	0.070	in.

The Compression Specimens were reduced in size to meet the specimen dimensional requirements

**Individual Unit Results**

Compression Units	Specimen No.	Received Wt, W <sub>r</sub> lb	Cross-Sectional Area *		Max. Load lb	Compressive Strength		Cut Height in
			Gross in <sup>2</sup>	Net in <sup>2</sup>		Gross psi	Net psi	
			#1	3.92		30.77	23.54	
#2	3.71	30.77	23.54	98530	3200	4190	2.20	
#3	3.81	30.77	23.54	104730	3400	4450	2.24	
Average	3.81	30.77	23.54	111807	3630	4750	2.22	

\* Unit areas determined as the average of the three absorption units and are assumed to be the same as those units tested in compression.

Absorption Units	Specimen No.	Avg Width in.	Avg Height in.	Avg Length in.	Edge Distance in.					
						#4	3.63	2.23	8.43	1.12
						#5	3.62	2.18	8.52	1.13
#6	3.63	2.26	8.53	1.15						
Average	3.62	2.22	8.49	1.14						

Date Tested:  
8/7/2017

Date Tested: 8/9/2017 to 8/21/2017	Specimen No.	Received	Immersed	Saturated	Oven-Dry	Absorp pcf	Density pcf	Net Volume ft <sup>3</sup>	Percent Solid %
		Wt, WR lb	Wt, WI lb	Wt, WS lb	Wt, WD lb				
		#4	3.81	2.05	3.92				
#5	3.54	1.89	3.75	3.51	8.2	117.8	0.0298	76.6	
#6	3.75	2.01	3.95	3.71	7.5	119.6	0.0310	76.8	
Average	3.70	2.05	3.87	3.66	6.9	121.0	0.0303	76.5	

Note: 1) These units meet or exceed the compressive strength, absorption and dimensional requirements of ASTM C1634-16.



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Director of Business Development