

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

Job No.: 18-282-4
Report Date: 3/26/2018

Client: Parker Block
Address: 30324 Millsboro Hwy
Millsboro, DE 19966

Testing Agency: National Concrete Masonry Association
Address: Research and Development Laboratory
13750 Sunrise Valley Drive
Herndon, VA 20171-4662

Standard Specification: ASTM C90-16a

Sampling Party: Parker Block

Unit Description: 8 x 8 x 16 inch Concrete Masonry Unit

Date Samples Received: 3/15/2018

Summary of Test Results

	ASTM C90-16a Specified Values	Average Test Results		ASTM C90-16a Specified Values	Average Test Results	
Physical Property			Physical Property			
Net Compressive Strength	2000 min	2150	psi	Min. Faceshell Thickness (t_f)	1.25 min	1.26 in.
Gross Compressive Strength	****	1090	psi	Min. Web Thickness (t_w)	0.75 min	1.01 in.
Density	****	102.4	pcf	Equivalent Web Thickness	****	2.34 in.
Absorption	18 max	12.1	pcf	Normalized Web Area (A_{wn})	8.5 min	26.0 in. ² /m ²
Percent Solid	****	50.5	%	Equivalent Thickness	****	3.86 in.
Net Cross-Sectional Area	****	60.02	in. ²	Max. Var. from Spec. Dimensions	.125 max	0.070 in.
Gross Cross-Sectional Area	****	118.75	in. ²			

Individual Unit Test Results

Compression Units	Specimen No.	Received Weight lb	Cross-Sectional Area *		Max. Load lb	Compressive Strength	
			Gross	Net		Gross	Net
			in. ²	in. ²		psi	psi
	#1	28.42	118.75	60.02	122070	1030	2030
	#2	28.46	118.75	60.02	144140	1210	2400
	#3	29.32	118.75	60.02	122020	1030	2030
	Average	28.73	118.75	60.02	129410	1090	2150

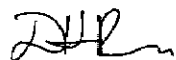
* Unit areas determined as the average of the three absorption units and are assumed to be the same as those units tested in compression.

Absorption Units	Specimen No.	Avg Width in.	Avg Height in.	Avg Length in.	Minimum Web Height in.	Avg./Min. Face Shell Thickness in.	Min. Web Thickness in.	Minimum Web Area in. ²	Normalized Web Area in. ² /m ²
	#4	7.63	7.58	15.58	7.58	1.26	1.01	22.98	25.8
	#5	7.63	7.63	15.57	7.63	1.25	1.01	23.17	26.1
	#6	7.63	7.63	15.58	7.63	1.26	1.01	23.22	26.1
	Average	7.63	7.61	15.57	7.61	1.26	1.01	23.12	26.0

**Where the thinnest points of opposite face shells differ in thickness by less than 0.125 inches, their measurements are averaged.

Date Tested: 3/22/2018 to 3/24/2018	Specimen No.	Received Weight lb	Immersed Weight lb	Saturated Weight lb	Oven-Dry Weight lb	Absorption pcf	Density pcf	Net Volume ft ³	Percent Solid %
	#4	27.90	13.42	29.78	28.60	12.1	101.5	0.2622	50.4
	#5	28.72	13.86	30.38	27.10	12.4	102.4	0.2647	50.5
	#6	29.16	14.01	30.62	27.48	11.8	103.2	0.2662	50.7
	Average	28.59	13.76	30.26	27.06	12.1	102.4	0.2644	50.5

Comments: 1) These units meet or exceed the compression strength, absorption and dimensional requirements of ASTM C90-16a.



Douglas H. Ross
Manager, Research and Development Laboratory



Jason J. Thompson
Vice President of Engineering