



**NATIONAL
CONCRETE MASONRY
ASSOCIATION**

Sustainable Concrete Products for Structures and Hardscapes

13750 Sunrise Valley Drive
Herndon, Virginia 20171-4662
703.713.1900 ■ 703.713.1910 Fax
ncma@ncma.org ■ www.ncma.org

ASTM C 140 Test Report

Job No.: 07-270-1
Report Date: 4/9/2007

Client: Allied Concrete
Address: 1000 Harris St Box 1647
Charlottesville, VA 22902

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

Unit Specification: ASTM C90-06

Sampling Party: Allied Concrete

Unit Designation/Description:
4" Double Corner
Concrete Masonry Unit

Summary of Test Results

Physical Property	Specified Values	Average Test Results		Physical Property	Specified Values	Average Test Results	
		Test Results	Units			Test Results	Units
Net Compressive Strength	1900 min	2290	psi	Min. Faceshell Thickness (t_{fs})	0.75 min	1.11	in.
Gross Compressive Strength	****	1660	psi	Min. Web Thickness (t_w)	0.75 min	1.2	in.
Density	****	112.7	pcf	Equivalent Web Thickness	1.63 min	2.8	in.
Absorption	15 max	13.0	pcf	Equivalent Thickness	****	2.6	in.
Percent Solid	****	72.5	%	Max. Var. from Spec. Dimensions	.125 max	0.11	in.
				Net Cross-Sectional Area	****	41.3	in ²
				Gross Cross-Sectional Area	****	57.0	in ²

Individual Unit Test Results

Specimen No.	Received Wt, W_R lb	Cross-Sectional Area *		Max. Load lb	Compressive Strength	
		Gross in ²	Net in ²		Gross psi	Net psi
#1	21.45	57.00	41.34	97250	1710	2350
#2	21.28	57.00	41.34	96180	1690	2330
#3	21.10	57.00	41.34	90776	1590	2200
Average	21.28	57.00	41.34	94740	1660	2290

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

Specimen No.	Avg Width	Avg Height	Avg Length	Avg./Min. t_{fs} **	Min. t_w
	in.	in.	in.	in.	in.
#4	3.66	7.67	15.59	1.10	1.22
#5	3.67	7.67	15.62	1.13	1.22
#6	3.64	7.74	15.61	1.10	1.20
Average	3.65	7.69	15.60	1.11	1.22

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

Specimen No.	Received Wt, W_R	Immersed Wt, W_i	Saturated Wt, W_s	Oven-Dry Wt, W_D	Absorp	Density	Net Volume	Percent Solid
	lb	lb	lb	lb	pcf	pcf	ft ³	%
#4	21.38	11.71	23.18	20.81	12.9	113.2	0.1838	72.6
#5	21.30	11.62	23.12	20.68	13.2	112.2	0.1843	72.6
#6	21.10	11.64	23.10	20.71	13.0	112.8	0.1837	72.3
Average	21.26	11.66	23.13	20.73	13.0	112.7	0.1839	72.5

Comments: These tested properties meet the compressive strength, absorption and dimensional requirements of ASTM C 90-06.

Jeffrey S. Stein
Jeffrey S. Stein, P.E.
Manager, Research and Development Laboratory