

Client: Mr. John P. Orsina
Address: Westbrook Concrete Block Co., Inc.
PO Box 700
Westbrook CT 06498

Project Name: Westbrook Concrete Block Lab Tests

Date Received: February 3, 2016

Date of Compression Testing: February 25, 2016

Unit Specification: ASTM C90

Unit Designation and Description: Concrete Masonry Unit
4x8x16" Regular Light Weight

Laboratory Number: 10- 137747

Summary of Test Results

Physical Property	Specification Values	Average Test Results	Physical Property	Specification Values	Average Test Results
Net Compressive Strength (min.)	2000	3840 <i>psi</i>	Min. Faceshell Thickness (FST)	0.75	1.04 <i>in.</i>
Gross Compressive Strength		2850 <i>psi</i>	Min. Web Thickness (WT)	0.750	1.07 <i>in.</i>
Density		105.1 <i>pcf</i>	Equivalent Web Thickness		2.46 <i>in.</i>
Absorption (max.)	15	12.7 <i>pcf</i>	Equivalent Thickness		2.70 <i>in.</i>
Percent Solid		74.2 %	Normalized Web Area	6.5	39.4 <i>in.²/ft.²</i>
Net Cross-Sectional Area		42.02 <i>in.²</i>	Max. Var. From Spec. Dimensions		<i>in.</i>
Gross Cross-Sectional Area		56.68 <i>in.²</i>	Moisture Content		%

Individual Unit Test Results

Specimen No.	Received Wt, W _R <i>lb.</i>	Cross-Sectional Area		Max. Load <i>lb</i>	Compressive Strength	
		Gross <i>in.²</i>	Net* <i>in.²</i>		Gross <i>psi</i>	Net <i>psi</i>
4	21.20	57.14	42.02	128215	2240	3050
5	21.59	56.60	42.07	179865	3170	4270
6	20.81	56.30	41.96	177420	3150	4220
Average	21.20	56.68	42.02	161830	2850	3840


* Net area determined from absorption specimens unless solid units are used.

Specimen No.	Average Width <i>in.</i>	Average Height <i>in.</i>	Average Length <i>in.</i>	Average Min. FST <i>in.</i>	Average Min. WT <i>in.</i>	Normalized Web Area <i>In.²/ft.²</i>
1	3.63	7.63	15.60	1.04	1.03	38.1
2	3.64	7.55	15.59	1.06	1.12	41.5
3	3.64	7.66	15.65	1.04	1.05	38.7
Average	3.64	7.61	15.61	1.04	1.07	39.4

Specimen No.	Received Wt, W _R ** <i>lb</i>	Immersed Wt, W _I <i>lb</i>	Saturated Wt, W _S <i>lb</i>	Oven-Dry Wt, W _O <i>lb</i>	Absorption		Density <i>pcf</i>	Net Volume <i>ft³</i>	Net Area <i>in²</i>	Percent Solid %	Moisture Content** % of total absorption
	<i>lb</i>	<i>lb</i>	<i>lb</i>	<i>lb</i>	<i>pcf</i>	%	<i>pcf</i>	<i>ft³</i>	<i>in²</i>	%	
1	21.43	10.57	22.19	19.97	11.9	11.1	107.2	0.1862	41.99	74.4	
2	20.13	9.76	21.21	18.66	13.9	13.7	101.7	0.1834	42.43	74.0	
3	21.34	10.53	22.17	19.86	12.4	11.6	106.5	0.1865	41.85	74.0	
Average	20.97	10.29	21.86	19.50	12.7	12.1	105.1	0.1854	42.09	74.2	

**Received weight determined at the time of unit delivery to the job site or from units sampled at that time and delivered to the laboratory in sealed containers for moisture content determination.

Remarks: The units were tested according to ASTM C140. This set meets the absorption and compressive strength requirements of ASTM C90


Chas M. Snyder, PE
Laboratory Manager