

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: June 1, 2016

Date of Compression Testing: June 9, 2016

Unit Specification: ASTM C90

Unit Designation and Description: Concrete Masonry Unit
8x8x16 LW Omni Block

Laboratory Number: 10- 140658

Summary of Test Results

Physical Property	Specification Values	Average Test Results	Physical Property	Specification Values	Average Test Results
Net Compressive Strength (min.)	2000	3630 <i>psi</i>	Min. Faceshell Thickness (FST)	1.25	1.26 <i>in.</i>
Gross Compressive Strength		2090 <i>psi</i>	Min. Web Thickness (WT)	0.750	1.58 <i>in.</i>
Density		107.7 <i>pcf</i>	Equivalent Web Thickness		3.62 <i>in.</i>
Absorption (max.)	15	12.1 <i>pcf</i>	Equivalent Thickness		4.42 <i>in.</i>
Percent Solid		57.7 %	Normalized Web Area	6.5	57.9 <i>in.²/ft.²</i>
Net Cross-Sectional Area		69.21 <i>in.²</i>	Max. Var. From Spec. Dimensions		<i>in.</i>
Gross Cross-Sectional Area		119.70 <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	34.35	119.84	69.13	244065	2030	3530
5	33.79	119.57	69.41	235380	1960	3390
6	33.89	119.68	69.09	274495	2290	3970
Average	34.01	119.70	69.21	251310	2090	3630

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

Specimen No.	Average Width	Average Height	Average Length	Average Min. FST	Average Min. WT	Normalized Web Area
	<i>in.</i>	<i>in.</i>	<i>in.</i>	<i>in.</i>	<i>in.</i>	<i>In.²/ft.²</i>
1	7.65	7.58	15.65	1.27	1.59	58.4
2	7.64	7.58	15.66	1.27	1.58	57.9
3	7.65	7.59	15.69	1.25	1.56	57.4
Average	7.65	7.58	15.66	1.26	1.58	57.9

Specimen No.	Received Wt, W _R **	Immersed Wt, W _I	Saturated Wt, W _S	Oven-Dry Wt, W _O	Absorption		Density	Net Volume	Net Area	Percent Solid	Moisture Content**
	<i>lb</i>	<i>lb</i>	<i>lb</i>	<i>lb</i>	<i>pcf</i>	%	<i>pcf</i>	<i>ft³</i>	<i>in²</i>	%	% of total absorption
1	34.61	17.57	36.60	33.04	11.7	10.8	108.3	0.3049	69.18	58.0	
2	34.23	17.46	36.36	32.57	12.5	11.6	107.5	0.3028	69.18	57.7	
3	34.08	17.29	36.17	32.46	12.3	11.4	107.3	0.3025	69.13	57.5	
Average	34.31	17.44	36.38	32.69	12.1	11.3	107.7	0.3034	69.16	57.7	

**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
NCMA 7-1C Fire Rating: 2.3 hours using the client provided mix design of 55.8% Expanded Shale, 6% Granite and 38.2% Sand.



Chas M. Snyder, PE
Laboratory Manager