



PENNONI ASSOCIATES INC.  
CONSULTING ENGINEERS

Client: WestBrook Concrete Block Co. Inc.  
Address: Mr. John P Orsina  
439 Spencer Plains Rd  
Westbrook, CT 06498

Unit Specification: ASTM C90

Unit Designation and  
Description: Concrete Masonry Unit  
8x8x16 Spectra Glaze LW - Set 8

Project No.: WECBX22001

Report Date: August 9, 2024

Project Name: Westbrook Concrete Block Co. Inc.

Date Received: July 9, 2024

Date of Compression Testing: August 6, 2024

Date of Absorption Testing: August 6, 2024

Testing Technician: Mwhelan

Laboratory Number: 208817

Physical Property	Specification Values	Average Test Results
Net Compressive Strength (min.) (psi)	2000	<b>3460</b>
Gross Compressive Strength (psi)		<b>1710</b>
Density (pcf)		<b>109.3</b>
Absorption (max.) (pcf)	15	<b>13.0</b>
Percent Solid (%)		<b>49.0</b>
Net Cross-Sectional Area (in. <sup>2</sup> )		<b>58.37</b>
Gross Cross-Sectional Area (in. <sup>2</sup> )		<b>119.13</b>

Physical Property	Specification Values	Average Test Results
Min. Faceshell Thickness (FST) (in.)	1.25	<b>1.26</b>
Min. Web Thickness (WT) (in.)	0.750	<b>1.11</b>
Equivalent Web Thickness (in.)		<b>2.54</b>
Equivalent Thickness (in.)		<b>3.75</b>
Normalized Web Area (in. <sup>2</sup> /ft. <sup>2</sup> )		<b>30.5</b>
Max. Var. From Spec. Dimensions		
Moisture Content (%)		

Compressive Strength						
Specimen No.	Received Wt, W <sub>R</sub> lb.	Cross-Sectional Area		Max. Load lb.	Compressive Strength	
		Gross in. <sup>2</sup>	Net* in. <sup>2</sup>		Gross psi	Net psi
		4	30.23		119.62	58.88
5	29.89	119.66	59.08	211260	1760	3580
6	29.98	118.11	59.23	224985	1900	3800
<b>Average</b>	<b>30.03</b>	<b>119.13</b>	<b>59.06</b>	<b>204710</b>	<b>1710</b>	<b>3460</b>

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


Compression Units

The compression units were reduced in width and/or length to meet test specimen dimensional requirements.

Absorption										
Specimen No.	Received Wt, W <sub>R</sub> **	Immersed Wt, W <sub>I</sub>	Saturated Wt, W <sub>S</sub>	Oven-Dry Wt, W <sub>D</sub>	Absorption		Density	Net Volume	Net Area	Percent Solid
	lb	lb	lb	lb	pcf	%	pcf	ft <sup>3</sup>	in <sup>2</sup>	%
1	29.78	15.39	31.71	28.30	13.0	12.0	108.2	0.2614	58.91	49.8
2	29.86	15.67	31.67	28.39	12.8	11.5	110.8	0.2562	58.86	48.6
3	29.84	15.54	31.80	28.40	13.0	12.0	109.0	0.2605	58.90	48.6
<b>Average</b>	<b>29.83</b>	<b>15.53</b>	<b>31.73</b>	<b>28.36</b>	<b>13.0</b>	<b>11.9</b>	<b>109.3</b>	<b>0.2594</b>	<b>58.89</b>	<b>49.0</b>

\*\*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  
This report shall not be reproduced, except in full, without prior written approval from Pennoni. The above results relate only to the items tested.  
Samples were obtained and delivered to the lab by the client.

  
Joseph Ridgway, PE  
Laboratory Manager

