MASTER® BUILDERS SOLUTIONS

Technical Services Laboratory Report
for

Bilco Brick
(Professional Modular-Size Brick)

ASTM C1634 Testing of Concrete Masonry Units

Lancaster, Texas

AASHTO Accredited

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INTRODUCTION

The Technical Services Laboratories of Master Builders Solutions Admixtures US, LLC received one set of normal weight concrete brick units, each measuring 3.6 x 2.3 x 7.6 inches, on 5/22/26. The units were identified as Professional modular-size brick. Testing was requested to evaluate compliance with ASTM C1634-23, Specification for Concrete Facing Brick and Other Concrete Masonry Facing Units. The submitted mix design can be found in Appendix A.

SAMPLE PREPARATION AND METHODS

Compressive strength, density, and absorption characteristics were determined in accordance with the testing procedures outlined in ASTM C140-26, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units. Compressive strength specimens were capped with high strength gypsum prior to testing per ASTM C1552-23, Standard Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing.

RESULTS

The results of testing are summarized in Table 1. More complete data on compressive strength, density and absorption can be found in Appendix B.

Table 1 – Testing Results for Professional Modular-Size Brick

Strength (psi)	Density (pcf)	Absorption (%)
7500	130.8	6.8

CONCLUSION

The units tested meet the requirements of ASTM C1634-23, Concrete Facing Brick and Other Concrete Masonry Facing Units.

Appendix B – ASTM C140 Data

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ASTM C140/C140-20 Test Report
Sampling and Testing Concrete Masonry Units and Related Units

W/O No.: 26-0454

Client: Bilco Brick
Address: Lancaster, TX

Testing Agency: Master Builders Solutions US LLC
Date Samples Received: 5/22/2026

Unit Spec: ASTM C1634

Unit Description: Normal Weight 2.2x3.6x7.6

Project ID: Professional (Blue)

Summary of Test Results: **Professional (Blue)**

Physical Property	ASTM C1643 Specified Values	Average Test Results	
Net Compressive Strength	3500 min	7500	psi
Gross Compressive Strength	---	7180	psi
Density (Oven Dry Condition)	≥125	130.8	pcf
Absorption	10 max	6.8	pcf
Absorption %		5.2	%
Percent Solid	---	100.0	%
Net Cross-Sectional Area	---	26.8	$in.^2$
Gross Cross-Sectional Area	---	28.0	$in.^2$

Full Size Unit Measurements

Date Tested:		Avg. Width (in.)	Avg. Height (in.)	Avg. Length (in.)
7/7/2026	A	3.6	2.2	7.8
	B	3.6	2.2	7.7
	C	3.6	2.2	7.7
	Average	**3.6**	**2.2**	**7.7**

Compression Specimens

Date Tested:		Avg. Width (in.)	Avg. Height (in.)	Avg. Length (in.)	Cross-Sectional Area Gross ($in.^2$)	Cross-Sectional Area Net ($in.^2$)	Max. Load (lb)	Compressive Strength Gross (psi)	Compressive Strength Net (psi)
7/7/2026	A	3.6	2.2	7.8	28.3	26.8	193484	6840	7210
	B	3.6	2.2	7.7	27.8	26.9	184424	6640	6850
	C	3.6	2.2	7.7	28.0	26.7	225449	8070	8450
	Average	**3.6**	**2.2**	**7.7**	**28.0**	**26.8**	**201119**	**7180**	**7500**
					Min.				

Absorption Specimens

Date Tested:		Avg. Width (in.)	Avg. Height (in.)	Avg. Length (in.)	Equivalent thickness (in.)
6/22/2026	A	3.6	2.2	7.8	3.5
	B	3.6	2.2	7.7	3.5
	C	3.6	2.2	7.7	3.5
	Average	**3.6**	**2.2**	**7.7**	**3.5**

Date Tested:		Received Weight (lb)	Immersed Weight (lb)	Saturated Weight (lb)	Oven-Dry Weight (lb)	Absorption (pcf)	Absorption (%)	Net Volume (ft^3)	Moisture Content (%)	Density (pcf)
6/22/2026 to 6/25/2026	A	4.6	2.6	4.8	4.5	7.1	5.5	0.03	47.3	130.3
	B	4.7	2.6	4.8	4.6	6.5	5.0	0.03	50.4	130.5
	C	4.6	2.6	4.8	4.6	6.6	5.0	0.03	41.5	131.5
Average		**4.7**	**2.6**	**4.8**	**4.5**	**6.8**	**5.2**	**0.03**	**46.4**	**130.8**

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