

# BOWSER-MORNER, INC.

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AASHTO/ISO 17025 Accredited • USACE Validated



## REPORT ON TESTS OF CONCRETE MASONRY UNITS

**Report To:** Saturn Materials  
Attn: Fred Dunand  
350 Yorkville Park Square  
Columbus, MS 39702

**Report Date:** 12/19/16  
**Job No.:** 177444  
**Report No.:** 419665B  
**No. of Pages:** 2

**Date Made:** 11/10/2016

**Date Received:** 11/17/16

**Specs:** ASTM C 90

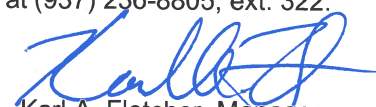
**Test Methods:** ASTM C 140, C 426

**Unit:** 8" Normal Weight Loadbearing Concrete Masonry Unit - Hollow Core (8 x 8 x 16 Thru Wall)

COMPRESSIVE STRENGTH					SPECIFICATIONS	
Specimen No.	1D	1E	1F	Average	Individual	Average
Length in Inches	15.62	15.61	15.62			
Width in Inches	7.61	7.61	7.62	7.61		
Height in Inches	7.62	7.57	7.61			
Norm. Web Area, sq in/sq ft	33.00	33.13	33.26	33.13		
Equiv. Web Thickness, in/ft.	2.78	2.85	2.86	2.83		2 1/4 (2.25) Min.
Min. OW Thickness, in.	1.31	1.31	1.32	1.31		1 1/4 (1.25) Min.
Min. Web Thickness, in.	1.28	1.28	1.27	1.28		1 Min.
Gross Area, Sq. In.	118.9	118.8	119.0			
No. of Cells	2	2	2			
Total Load in lbs.	269,330	286,180	307,115			
Gross Unit Load, psi	2270	2410	2580	2420		
Gross Volume, Cu. Ft.	0.5242	0.5204	0.5242	0.5229		
Net Unit Load, psi	4140	4400	4730	4420	1700 Min.	1900 Min.
ABSORPTION					SPECIFICATIONS	
Specimen No.	1A	1B	1C	Average	Individual	Average
Wt. As Received, lbs.	38.47	37.17	37.29			
Suspended Wt., lbs.	20.83	19.79	19.95			
Wet Wt., lbs.	38.79	37.61	37.68			
Dry Wt., lbs.	37.63	36.35	36.47			
Absorption, lbs./Cu.Ft.	4.0	4.4	4.3	4.2	15 Max.	13 Max.
Absorption, % of Dry Wt.	3.1	3.5	3.3	3.3		
% Moisture, % Absorption	72.4	65.1	67.8			
Net Vol., Cu. Ft.	0.288	0.286	0.284	0.286		
Net Area, Sq. In.	65.3	65.2	64.5	65.0		
Dry Den, lbs./Cu.Ft.	130.7	127.3	128.4	128.8		
FIRE RATING						
Aggregate Type:	unknown					
Percent Solids:	54.7	%	Ohio Building Code (OBC) Table 721.3.2			
Equivalent Thickness:	4.2	inches	Fire Resistance Rating:	not requested		
LINEAR SHRINKAGE						
Linear Shrinkage @ Equilibrium, %:	0.054		ASTM C 90, section 5.2 Specification, % Max: 0.065			

Should you have any questions, or if we may be of further service, please contact me at (937) 236-8805, ext. 322.

KAF/bk/lhg  
419665B  
1-File  
1-Client

  
Karl A. Fletcher, Manager  
Construction Materials and  
Geotechnical Laboratories  
CMTT No. 7606

Report To: Saturn Materials  
 Received: 11/17/16  
 Methods: ASTM C 140, C426

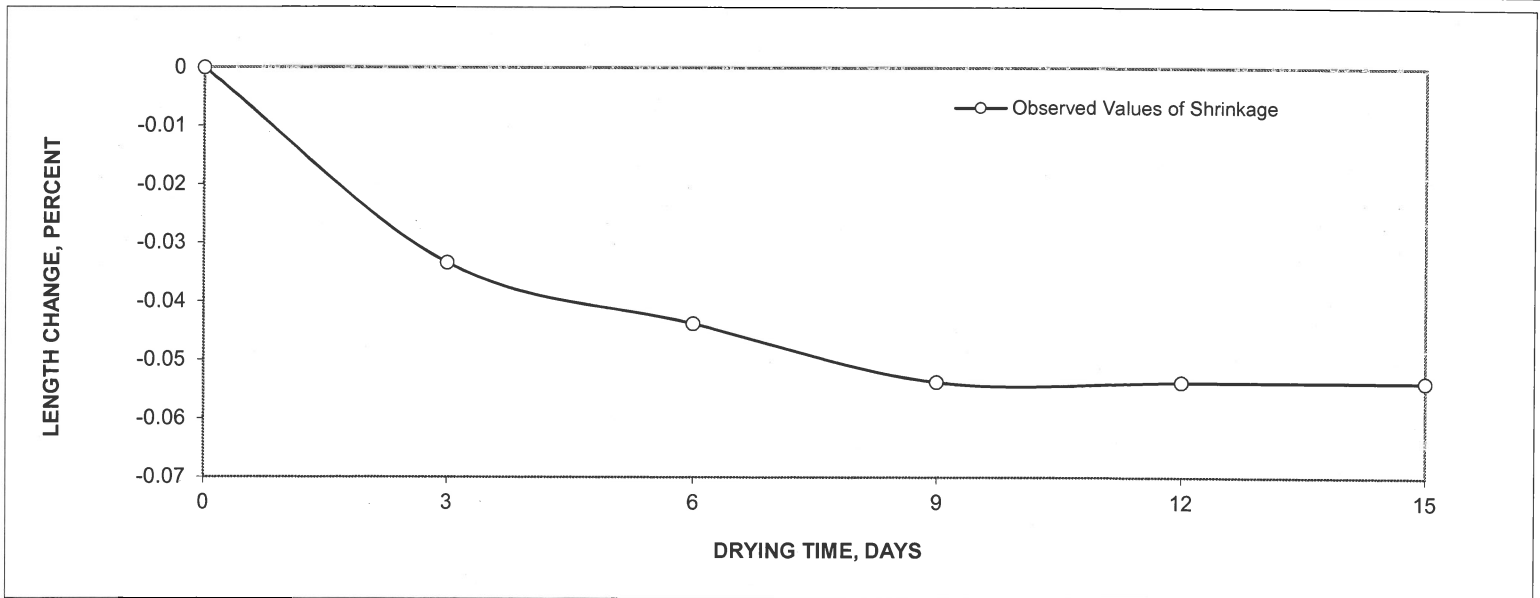
Specs: ASTM C 90

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Unit ID: Normal Weight Loadbearing Concrete Masonry Unit - Hollow Core

Ref. Rod Length: 15.36688

Day of Reading	Specimen ID	Reference Rod, inch	Specimen Readings, inch	Length inch	Length Change, %	Weight, lbs.	Weight Change, %	Avg Weight Change, %	Avg Length Change, %
0 12/2/2016	1G	0.0000	-0.0025	15.3644	n/a	7.7300	n/a	0	0
	1H	0.0000	0.0378	15.4047	n/a	8.0800	n/a		
	1I	0.0000	0.0274	15.3943	n/a	7.6400	n/a		
3 12/5/2016	1G	0.0000	-0.0086	15.3583	-0.0397	7.4000	-4.2691	-4.6558	-0.0334
	1H	0.0000	0.0335	15.4004	-0.0279	7.7300	-4.3317		
	1I	0.0000	0.0224	15.3893	-0.0325	7.2300	-5.3665		
6 12/8/2016	1G	0.0000	-0.0097	15.3572	-0.0469	7.3900	-4.3984	-4.9099	-0.0438
	1H	0.0000	0.0314	15.3983	-0.0416	7.7000	-4.7030		
	1I	0.0000	0.0208	15.3877	-0.0429	7.2100	-5.6283		
9 12/11/2016	1G	0.0000	-0.0111	15.3558	-0.0560	7.3900	-4.3984	-4.9099	-0.0538
	1H	0.0000	0.0298	15.3967	-0.0520	7.7000	-4.7030		
	1I	0.0000	0.0192	15.3861	-0.0533	7.2100	-5.6283		
12 12/14/2016	1G	0.0000	-0.0110	15.3559	-0.0554	7.3900	-4.3984	-4.9099	-0.0538
	1H	0.0000	0.0297	15.3966	-0.0526	7.7000	-4.7030		
	1I	0.0000	0.0192	15.3861	-0.0533	7.2100	-5.6283		
15 12/17/2016	1G	0.0000	-0.0110	15.3559	-0.0554	7.3900	-4.3984	-4.9099	-0.0538
	1H	0.0000	0.0297	15.3966	-0.0526	7.7000	-4.7030		
	1I	0.0000	0.0192	15.3861	-0.0533	7.2100	-5.6283		



Linear Shrinkage @ Equilibrium, %: 0.054      ASTM C 90-02, section 5.2 Specification, % Max: 0.065

The units submitted meet specifications for linear shrinkage.