



St. Marys Cement Inc. (U.S.)
 Detroit Concrete Laboratory
 9333 Dearborn, Detroit, MI 48209
 Phone: 313-849-4571

Standard Specification for Load Bearing Concrete Masonry Units ASTM C90

Client: Tri County
 Address: 1628 U.S. 20A
 Swanton, OH 43558

Job No: 078C-16
 Project:

Unit Specification: ASTM C90 - 14

Name / Description of Unit: 12 inch light weight stretcher

Nominal and Standard Dimensions (in.)

Nom W:	12.00	Nom H:	8.00	Nom L:	16.00
Std W:	11.63	Std H:	7.63	Std L:	15.63

Sampled By: Customer

Date: 7/12/2016

Notes:

Compressive Strength Testing ATSM C-140

		Unit # 1	Unit #2	Unit # 3
Width	Reading # 1	11.63	11.62	11.66
	Reading # 2	11.63	11.61	11.66
Height	Reading # 1	7.69	7.61	7.66
	Reading # 2	7.6	7.66	7.66
Length	Reading # 1	15.64	15.62	15.65
	Reading # 2	15.63	15.65	15.62
Minimum Thickness:				
Faceshell No. One		1.583	1.59	1.533
Faceshell No. Two		1.511	1.519	1.588
Web No. One		1.257	1.256	1.281
Web No. Two		1.32	1.343	1.323
Web No. Three		1.319	1.314	1.318

CMU Sample Weight	38.62	38.65	39.17
Maximum Compressive Load	264290	218320	238495

Description of

Cracking / Failure Load: Classice Compression

Measurements taken by: Jeremy Estell

Date: 8/22/2016

Absorption Testing ASTM C-140

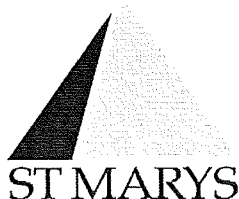
		Unit # 4	Unit # 5	Unit # 6
Width	Reading # 1	11.63	11.63	11.62
	Reading # 2	11.62	11.62	11.61
Height	Reading # 1	7.58	7.57	7.67
	Reading # 2	7.62	7.62	7.59
Length	Reading # 1	15.61	15.63	15.64
	Reading # 2	15.62	15.62	15.63

CMU Weight Measurements:

Sampled Weight.....	37.75	37.76	38.54
Suspended Weight.....	18.77	18.74	19.13
Saturated Surface Dry Weight.....	41.68	41.61	42.62
Oven Dry Weight.....	36.97	36.95	37.86

Measurements taken by: Jeremy Estell

Date: 8/19/2016



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ASTM Unit Specification: ASTM C 90 - 14

Name / Description of unit: 12 inch light weight stretcher

Nominal CMU Dimensions:

Width: 12.00 Height: 8.00 Length: 16.00

Notes: 0

SUMMARY OF ASTM C-140 TESTING

	REQUIRED	ACTUAL
CMU Gross Area Compressive Strength.....	*****	1320 psi
CMU Net Compressive Strength.....	2000 min	2860 psi
Moisture Content.....	*****	16.1 %
Absorption.....	18 max.	12.7 pcf
Density (Oven Dry Condition).....	*****	100.7 pcf
Minimum Faceshell Thickness.....	1.25 min.	1.511 in.
Minimum Web Thickness.....	0.75 min.	1.256 in.
Normalized Web Area	6.5 min.	12.00 in ² /ft ²
CMU Net Cross Sectional Area.....	*****	83.6 sq. in.
CMU Gross Cross Sectional Area.....	*****	181.9 sq. in.
CMU Percent Solid.....	*****	46.3 %
CMU Equivalent Thickness.....	*****	5.4 in.
Max. Variation From Specified Dimensions.....	0.125 max	0.065 in.

COMPRESSION

	Avg Width	Avg Height	Avg Length	Sample Weight	Total Load	Compressive Strength	
	in	in	in	lb	lb	Gr Area	Net Area
						psi	psi
CMU # 1	11.63	7.65	15.64	38.62	264290	1453	3141
CMU # 2	11.615	7.64	15.64	38.65	218320	1202	2593
CMU # 3	11.66	7.66	15.64	39.17	238495	1308	2846
Average	11.635	7.65	15.64	38.81	240360	1321	2860

ABSORPTION AND DENSITY

	Width	Height	Length	Absorp	Density	Gr Vol	Net Vol
	in	in	in	pcf	pcf	cu ft	cu ft
CMU # 4	11.63	7.60	15.62	12.8	100.7	0.7984	0.3671
CMU # 5	11.63	7.60	15.63	12.7	100.8	0.7984	0.3665
CMU # 6	11.62	7.63	15.64	12.6	100.6	0.8019	0.3764
Average	11.62	7.61	15.63	12.7	100.7	0.7995	0.3700

Comments: