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January 17, 2018

Fred Dunand
Saturn Materials
350 Yorkville Park Square
Columbus, MS 39702

Mr. Dunand,

Enclosed please find a report of testing performed by the National Concrete Masonry Association Research and Development Laboratory on the following products:

Report Number	Unit Description
18-212	Solid Modular Concrete Brick

Please note that the contents of this report are not to be reproduced, except in full, without the written approval of the NCMA Research and Development Laboratory.

We are constantly improving our services and would greatly appreciate any feedback regarding your experience with NCMA's Research and Development Laboratory. We have set up an online survey, which can be found at: <http://www.surveymonkey.com/s/DDFPZT9>. After taking the online survey, make use of the many resources available at our website, www.ncma.org. There you will find the latest industry news and events, a searchable directory of products and services, a vast collection of literature on the design, implementation, and marketing of manufactured concrete products and hardscape systems, as well as a list of the available laboratory services for future testing.

The National Concrete Masonry Association Research and Development Laboratory is dedicated to the scientific testing and research of concrete masonry products and systems. We take pride in meeting your product certification and evaluation requirements and look forward to continuing to service your testing needs for years to come.

Thank you for choosing NCMA's Research and Development Laboratory. Please feel free to contact me directly with any comments or questions at 703-713-1900 or dross@ncma.org.

Sincerely,

A handwritten signature in black ink, appearing to read 'DHR'.

Douglas H. Ross
Manager, Research and Development Laboratory

ASTM C140/C140M-17a Test Report
Sampling and Testing Concrete Masonry Units and Related Units

NCMA Job No: 18-212
Report Date: 1/17/2018

Client: Saturn Materials
Address: 350 Yorkville Park Square
Columbus, MS 39702

Testing Agency: National Concrete Masonry Association
Address: Research and Development Laboratory
13750 Sunrise Valley Drive
Herndon, VA 20171

Unit Specification: ASTM C55-17

Unit Description/Designation: Solid Modular Concrete Brick

Sampling Party: Saturn Materials

Date Samples Received: 1/11/2018

Summary of Test Results

Physical Property	ASTM C55-17 Required Value	ASTM C55-17 Tested Value
Net Compressive Strength	2500 psi minimum	11233 psi
Net Cross-Sectional Area	**** in ²	27.9 in ²
Maximum Variation from Specified Dimensions	0.125 in. maximum	0.048 in.

Individual Unit Results

Reduced Compression Units	Specimen	Specimen	Specimen	Aspect
	No.	Width in.	Height in.	Length in.
	#1	3.62	2.26	7.62
	#2	3.66	2.26	7.64
	#3	3.67	2.30	7.67
	Average	3.65	2.27	7.64

Specimen	Specimen	Cross-Sectional	Max. Load lb	Compressive Strength Net psi
	Received Wt, W _r lb	Area * Net in ²		
#1	5.04	27.61	333220	12070
#2	5.16	27.94	319300	11430
#3	5.27	28.13	286750	10200
Average	5.16	27.89	313090	11233

Date Tested:
1/17/2018

* Net cross-sectional area calculated as the product of the length and the width of the units since units are solid.

1) These units meet or exceed the compressive strength, unit weight, and dimensional requirements of ASTM C55-17.



Douglas H. Ross
Manager, Research and Development Laboratory



Jason J. Thompson
Vice President of Engineering