

Intratech Engineering Laboratories Ltd.

1080 Tapscott Road, Unit 31
Scarborough, Ontario
M1X 1E7

Telephone: (416) 754-2077

www.intratech-engineering.com

Fax: (416) 754-1167

Vintage Brick
100 Bradwick Drive, Unit 2
Concord, ON
L4K 1K8

December 05, 2017
Report: 136PT17-02
Lab No. L-6419

Attention: Mr. Gary Jepson

Re: Physical Testing of Clay Brick
Mora Ceramics "Black Smooth"

1. Introduction and Reference Standards

As per your request, Intratech performed compressive strength and water absorption testing on samples of fired clay brick, which were received at our laboratory on November 14, 2017.

The bricks were identified as "Black Smooth", manufactured in Spain by Mora Ceramics. The bricks were reportedly manufactured in 2017.

The specimens were prepared and tested in our laboratory using the following test standard:
CSA A82 – 14 Fired Masonry Brick Made from Clay or Shale.

2. Test Results and Comments

The specimens were tested in accordance with the above noted test standard, the results of which are presented in the enclosed table.

The specimens tested meet CSA A82 – 14 compressive strength and water absorption requirements for EG (Exterior Grade) brick. The specimens also meet the lesser requirements of IG (Interior Grade) brick.

CSA A82 – 14 acceptance criteria for brick to be graded EG (Exterior Grade) or IG (Interior Grade) are summarized for your convenience in the enclosed table.

Please note that unless other arrangements are made, all samples will be disposed of four weeks from the date of this report.

We trust that this meets your requirements. Please contact our office if we may be of further service.

Respectfully Submitted,

Alex Pfaff
General Manager

Frank Miles, P.Eng.
Vice President

Encl: Table 1: Physical Testing of Clay Brick – 1 page

Client: Vintage Brick
Project: Product Testing

December 05, 2017
Report: 136PT17-02

Table 1
Physical Testing of Clay Brick

Brick I.D.:	Black Smooth	Lab No.:	L-6419
Colour/Mark:	Black, 10 Cells	Date Received:	Nov. 14, 2017
Manufacturer:	Mora Ceramicas	Date(s) Tested:	Nov. 22, 2017
Test Standard:	CSA A82 – 14 Fired Masonry Brick Made from Clay or Shale		Nov. 28, 2017

Brick Specimen:	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>Average</u>	<u>Grade EG</u> <u>Type S</u> <u>Limits</u>	<u>Grade IG</u> <u>Type S</u> <u>Limits</u>
<u>DIMENSIONS</u>								
Length, mm	286.0	287.0	286.5	286.5	287.0	286.5	See Note 1	See Note 1
Width (Thickness), mm	88.5	89.0	89.0	89.0	89.0	89.0	See Note 1	See Note 1
Depth (Height), mm	47.5	47.5	47.5	47.5	47.5	47.5	See Note 1	See Note 1
Distortion, max, mm	-	-	-	-	-	-		
Out of Square, max, mm	-	-	-	-	-	-		
<u>COMPRESSIVE STRENGTH</u>								
Compressive Strength, MPa, Gross Cross-Sectional Area	78.3	59.5	78.8	68.0	61.9	69.3	20.7 Min. Average, 17.2 Min. Individual	17.2 Min. Average, 15.2 Min. Individual
<u>WATER ABSORPTIONS</u>								
24 Hr. Cold Water, %	3.2	4.8	3.4	5.1	5.0	4.3	8.0 Max.	n/a
5 Hr. Boiling Water, %	6.1	7.3	6.1	7.6	7.6	6.9	17.0 Max.	22.0 Max.
Saturation Coefficient	0.52	0.65	0.56	0.67	0.65	0.61	0.78 Max.	0.88 Max.
<u>FREEZE-THAW</u>								
Loss in Mass, %	-	-	-	-	-	-	Not tested	
Observed Breakage	-	-	-	-	-	-		

NOTES & COMMENTS:

- The reported dimensions are based on five full-size specimens, as per CSA A82-14, Clause 18.1. Information regarding specified brick dimension and type of brick not provided (i.e. S, X, or A). Type S assumed, as per Section 6.
- According to the CSA A82-14 standard, for brick to be graded as EG (Exterior Grade), the following acceptance criteria shall be met:
 - The noted minimum compressive strength requirements, and either
 - the noted maximum 5 hour boiling water absorption, and one of
 - the noted maximum 24 hour cold water absorption, or
 - the noted maximum saturation coefficient
 - OR
 - pass a 50-cycle freeze-thaw test.
- The specimens tested meet CSA A82-14 compressive strength requirements for EG (Exterior Grade) brick. The specimens tested meet CSA A82-14 water absorption requirements for EG (Exterior Grade) brick. Water absorption requirements are waived if the bricks pass a 50-cycle freeze-thaw test.
- Testing was performed on half-brick specimens obtained from full-size bricks.
- The above test results are applicable to the bricks provided to Intratech for testing. This report represents an instrument of service solely to Vintage Brick. Intratech assumes no responsibility for any third party use of the information and test results reported herein.