

TEST REPORT
THE BISHOP MATERIALS LABORATORY

100 Clemson Research Blvd.
Anderson, SC 29625
(864) 656-1094
Fax: (864) 656-1095
www.bishopmaterialsllab.com



08/06/2014

Name:	The Belden Brick Company 700 West Tuscarawas Street Canton, OH 44702	Plant:	The Belden Brick Company	*Temperature: 70 - 77F
Phone:	330-456-0031	Report Number:	5730.10631	*Humidity: 45% - 55%
Fax:	330-456-2694	Received Date:	06/17/2014	
		Sampled Date:	06/17/2014	
		Lot:	04-13-23	
		Product Code:		

Sample Description: **PLT 4, SHALE DOUBLE TYPE II**

							Test Date
Compressive Strength		1	2	3	4	5	Average
	<i>psi</i>	19,130	17,534	18,845	20,216	18,761	18,897
	<i>MPa</i>	131.9	120.9	129.9	139.4	129.4	130.3
*Measurement Uncertainty ± 231 psi							
Absorption		1	2	3	4	5	Average
5 Hour Submersion in Boiling Water (%)		2.72	1.74	0.38	1.51	0.38	1.35
*Measurement Uncertainty ± 0.55 % *The 1 and 2 hour boiled water absorption tests are not required by the customer							
Chemical Resistance		11	12				Average
Maximum Weight Loss (%)		1.18	1.58				1.38
07/21/2014							
Modulus of Rupture		1	2	3	4	5	Average
	<i>psi</i>	2,007	1,819	1,930	2,077	1,961	1,959
	<i>MPa</i>	13.8	12.5	13.3	14.3	13.5	14
07/11/2014							

The brick represented by the test results shown here comply with the physical property requirements of the standards listed below:
 ASTM C 980 - 13 Standard Specification for Industrial Chimney Lining Brick
 Type: I, II
 ASTM C 279 - 13 Standard Specification for Chemical Resistant Masonry Units
 Type: I, II

John Sanders, Ph.D., PE, Director

Gary W. Parker, Laboratory Supervisor

*This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

*The temperature and humidity of the Bishop Materials Laboratory is constantly kept between 70 - 77F, and 45-55%

The results shown above apply only to the samples tested, which are provided by the customer.

This test report shall not be reproduced except in full, without written approval of the laboratory.

THE NATIONAL BRICK RESEARCH CENTER

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Fax:	330-456-2694	Sampled Date:	06/17/2014
Sample Description:	PLT 4, SHALE DOUBLE TYPE II	Lot:	04-13-23
		Product Code:	
		Type:	Type I

Brick #	Corner A	Corner B	Corner C	Corner D	Pass/Fail	Test Date
1	0	0	0	0	Passed	
2	0	0	0	0	Passed	
3	0	0	2/64	0	Passed	
4	0	0	0	0	Passed	
5	0	0	0	0	Passed	
6	0	0	0	0	Passed	
7	0	2/64	0	0	Passed	
8	0	0	0	0	Passed	
9	0	0	0	0	Passed	
10	0	2/64	0	0	Passed	07/10/2014

Brick #	Concave Surface (Max)	Concave Edge (Max)	Convex Surface (Avg)	Convex Edge (Max)	Pass/Fail	Test Date
1	2/32	0	0	0	Passed	
2	1/32	0	0	0	Passed	
3	0	0	0	0	Passed	
4	0	0	0	0	Passed	
5	2/32	0	0	0	Passed	
6	2/32	0	0	0	Passed	
7	0	0	0	0	Passed	
8	0	0	0	0	Passed	
9	1/32	0	0	0	Passed	
10	1/32	0	0	0	Passed	07/10/2014