

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

PHYSICAL TESTING OF BURNED CLAY BRICK, CAN3-A82.2-M78

CLIENT:	Permatint 170 West Beaver Creek Rd, Richmond Hill, Ont.	REPORT DATE:	Mar. 26, 2008
PROJECT:	N/A	REPORT NO.:	137PT08-01Final
BRICK MARK:	Leicester Orange Stock, Single Frog	LAB NUMBER:	L-4231
[Client Info.]	N/A	DATE MADE:	Not Known

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>Average</u>	<u>CAN3-A82.1-M87 Type SW/FBS Brick Limits (See Note 1)</u>
<u>DIMENSIONS</u>							
Length, mm	210.5	212.5	211.0	210.0	210.0		
Width, mm	99.5	100.1	99.5	100.0	100.0		
Depth, mm	64.0	65.0	65.0	64.5	64.0		
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>		
Length, mm	210.0	209.5	211.5	210.5	210.0	210.5	215 +/- 7.94 Note 1.
Width, mm	100.5	99.0	100.5	100.0	100.0	100.0	102 +/- 4.76 Note 1.
Depth, mm	64.5	63.5	64.5	64.5	64.0	64.5	65 +/- 2.38 Note 1.
<u>WATER ABSORPTIONS</u>							
24 Hr., Cold Water, %	11.1%	11.9%	12.2%	11.8%	11.2%	11.6%	8% max Average [With no more than one brick between 8 - 10%] [See note 2]
5 Hr. Boiling Water %	17.2%	17.7%	17.6%	17.3%	17.3%	17.4%	17.0 max. Average 20.0 max. Individual
Saturation Coefficient	0.65	0.67	0.69	0.68	0.65	0.67	0.78 max. Average 0.80 max. Individual [See note 2]
<u>COMPRESSIVE STRENGTH</u>							
Compressive Strength, MPa	43.4	39.7	40.4	40.5	43.2	41.44	20.68 min. Average 17.24 min. Individual
<u>FREEZE-THAW</u>							
Loss in Mass, %	0.00	0.04	0.01	0.02	0.03	0.02	[See note 3]
Observed Breakage	None	None	None	None	None	None	[See note 3]

NOTES & COMMENTS REGARDING TEST RESULTS:

1. Type FBS brick assumed [General use with wider range of colour and size permitted]. SW = Severe weather condition. Manufacturer's specified dimensions provided from Istock product data sheet. Average dimension calculated based on 10 bricks.
2. According to specification CSA A82.1, the saturation coefficient requirement is waived providing the cold-water absorption requirements are met. The test results indicate that the sampled brick do not meet the cold-water absorption requirement. Therefore; the brick must meet both the 5-hour boiling water and saturation coefficient requirements indicated to be exempt from the freezing thawing test. [The sampled brick, however, do not meet both requirements].
3. According to specification CSA A82.1, brick that meet compressive strength requirements, and are subject to 50 cycles of the freezing and thawing test and a) experience no breakage, b) show not greater than 0.5% loss in dry mass of any individual brick shall be classified as Grade SW. The sampled brick meet these three requirements and therefore can be classified as Grade SW.

General Notes:

- a) The above test results are applicable to the bricks provided by Permatint to Intratech for testing.
- b) Intratech is not liable for third party use.

Respectfully submitted,

Frank Miles, P. Eng., Vice President
Intratech Engineering Laboratories Ltd.



Intratech Engineering Laboratories Ltd.

