



**PERFORMANCE EVALUATION TEST REPORT**

**Rendered to:**

**TBC (CANADA) INC.**

**PRODUCT: 0.5 in. Thick Metallic-Faced  
Foam Insulation Product**

**Report No: A8676.01-106-31**  
**Report Date: 05/23/11**  
**Expiration Date: 05/04/15**

**PERFORMANCE EVALUATION TEST REPORT**

Rendered to:

TBC (CANADA) INC.  
45016 Rochon Road P.O. Box 577  
Lasalle, Manitoba R0G 1B0  
Canada

Report No:A8569.01-106-31  
Test Dates: 04/08/11  
Through: 05/04/11  
Report Date: 05/23/11  
Expiration Date: 05/04/15

**Product:** 0.5 in. Thick Metallic-faced Foam Insulation Product

**Project Summary:** Architectural Testing, Inc. was contracted by TBC (Canada) Inc. to perform testing and evaluation services for water vapor transmission properties of their 0.5 in. thick metallic-faced foam insulation product. The mean water vapor transmission (WVT) of the specimens was 0.0233 (g/h·m<sup>2</sup>) and the permeance (WVP) of the specimens was 0.095 US perms. The test results satisfied performance requirement of 1 perm [5.7 x 10<sup>-11</sup> kg/Pa·s·m<sup>2</sup>] or less for Vapor Retarders as stated in 2009 ICC International Residential Code® (IRC).

**Test Method:** The test specimen was evaluated in accordance with ASTM E 96/E96M-10 (Reapproved 2010), *Standard Test Method for Vapor Transmission of Materials*.

**Test Procedures:** Evaluations were conducted on materials provided by TBC (Canada) and modified by Architectural Testing as required to produce test specimens.

Water vapor transmission evaluation was determined in accordance with the procedures detailed in ASTM E 96, Procedure A - Desiccant Method. Four specimens (three test specimens and one "dummy" control) were cut to test dimensions (nominal 4 in diameter) from sample panels and conditioned to standard lab conditions (23 ±2°C and 50 ±5% R.H.) prior to testing. Three specimens were sealed into rubber gasket lined aluminum test cups with a 3.0-inch diameter desiccant filled chamber, allowing for an exposed surface area of 7.065 square inches for water vapor exchange. The dummy specimen was treated as above without the desiccant. The purpose of the dummy specimen was to allow for compensation for variation in ambient test conditions (temperature, barometric pressure). The test cups were weighed on a Mettler Toledo AX504 balance (ICN 003449) and maintained at standard lab conditions (as per Appendix X1, Condition A). Mass measurements were taken daily in accordance with Section 11.3 until the rate of mass increase was observed to be constant for at least six properly spaced plotted points (per Section 13.1.2). Water vapor transmission (WVT) and Permeance (WVP) were calculated based on the slope of the resultant line and averaged for the test series.

**Test Results:** The results are reported in the following table.

<b>ASTM E 96 - Water Vapor Transmission (Dry Cup Method)</b>				
<b>Specimen No.</b>	<b>Test Area (in<sup>2</sup>)</b>	<b>Measured Duration (Hrs)</b>	<b>Water Vapor Transmission (g/h·m<sup>2</sup>)</b>	<b>Water Vapor Permeance (Perms)</b>
<b>1</b>	7.065	144	0.0284	0.123
<b>2</b>			0.0117	0.060
<b>3</b>			0.0297	0.127
<b>Mean</b>			<b>0.0233</b>	<b>0.103</b>

- Mean test conditions were 70.4°F (0.748 in. Hg Saturation Vapor Pressure) and 49.0% R.H.

Data sheets, representative samples of test specimens, a copy of this test report will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period such materials shall be discarded without notice and the service life of this report by Architectural Testing will expire. Results obtained are tested values and were secured using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimens tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:

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Scott D. Scallorn - Technician I  
Components / Materials Testing

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Gary Hartman, P.E. - Director  
Components / Materials Testing

SDS:sds/nlb

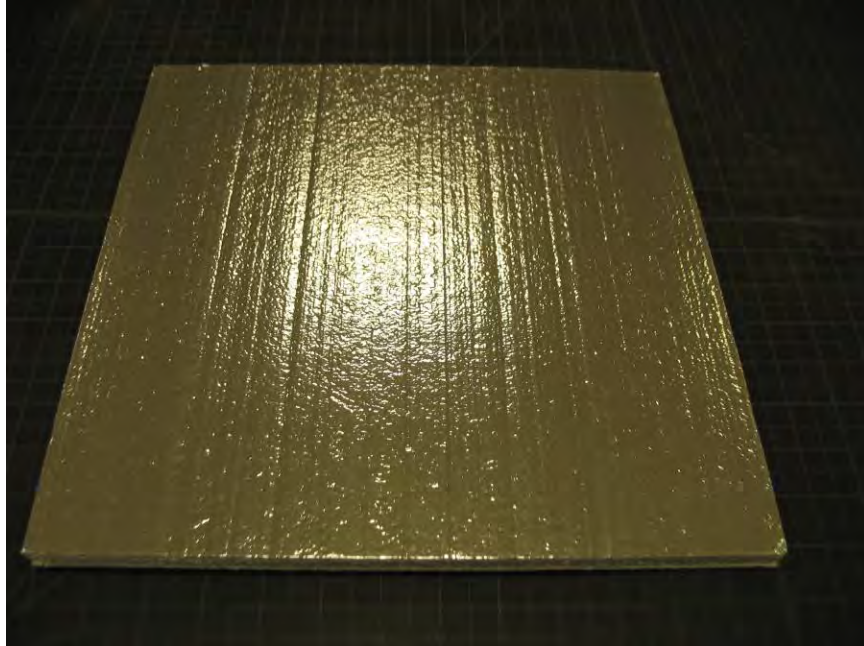
Attachments (pages) This report is complete only when all attachments listed are included.  
Appendix A - Photographs (2)

### Revision Log

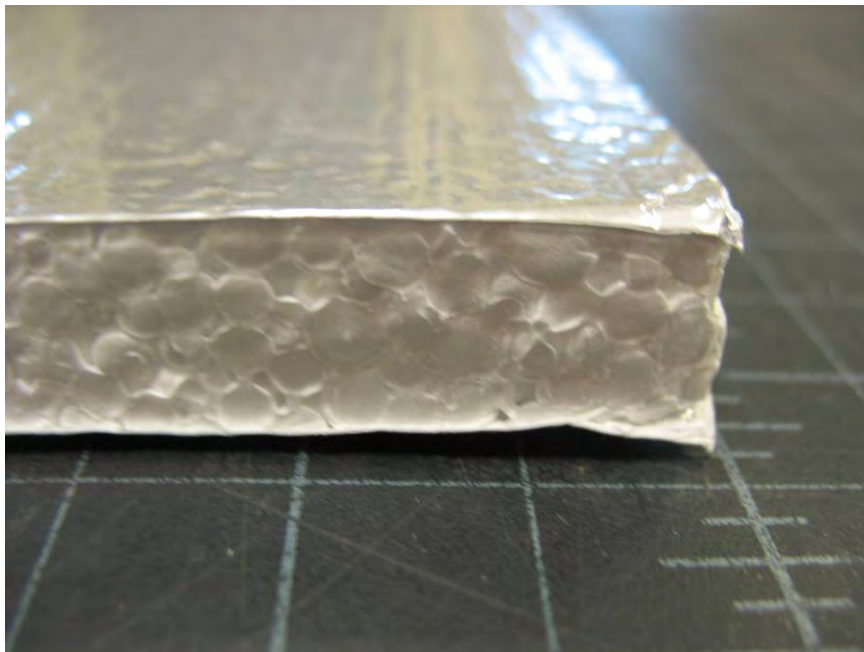
<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	05/23/11	N/A	Original report issue.

**APPENDIX A**

**Photographs**



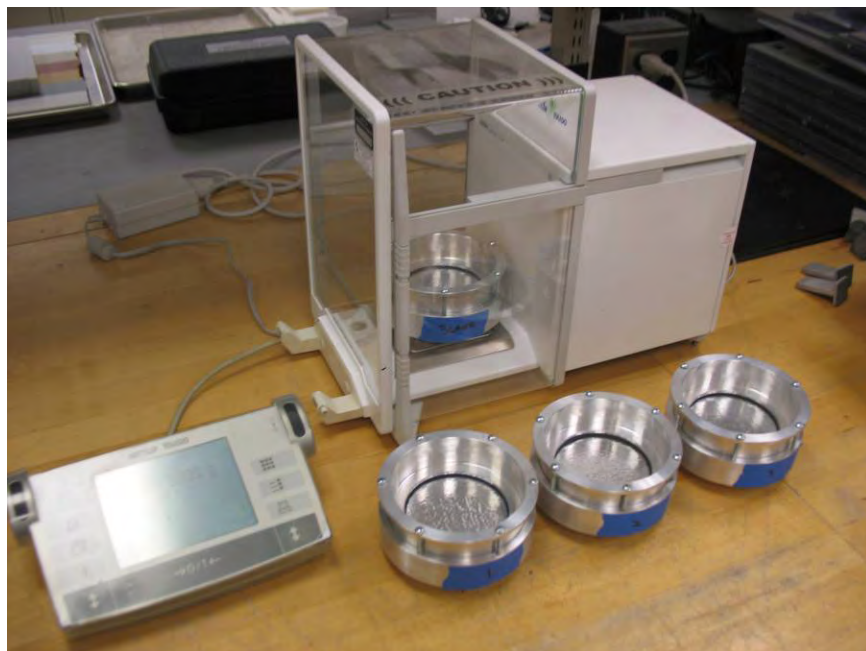
**Photo No. 1**  
**Typical Insulation Specimen Panel as Received**  
**(Top and Bottom Both Foil-Faced)**



**Photo No. 2**  
**0.5 in. Thick Metallic-Faced Foam Insulation Specimen Profile Detail**



**Photo No. 3**  
**Test Cup Desiccant Chamber Detail**



**Photo No. 4**  
**Water Vapor Transmission Test Setup**