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EVALUATION CENTER

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RENDERED TO

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PRODUCT EVALUATED: Type 2 EPS with facer (nominal 1" thickness)
EVALUATION PROPERTY: Air Permeance

**Report of testing Type 2 EPS with facer for Air Permeance in accordance
with ASTM E2178-11: *Standard Test Method for Air Permeance of
Building Materials, Section 7.3 (Rigid Materials)***

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2 REVISION SUMMARY

DATE	SUMMARY
April 11, 2017	Date of original report

3 INTRODUCTION

Intertek has conducted testing for Mansonville Plastics (BC) Ltd., on their Type 2 EPS with facer, to evaluate Air Permeance. Testing was conducted following the standard methods of ASTM E2178-11: *Standard Test Method for Air Permeance of Building Materials, Section 7.3 (Rigid Materials)*. This evaluation began April 5, 2017 and was completed April 10, 2017.

4 TEST SAMPLES

4.1. SAMPLE SELECTION

Samples were independently selected for testing by Intertek representative Luke Kong at Mansonville Plastics (BC) Ltd.'s Surrey, BC facility on December 20, 2016. Samples were received at the Evaluation Center on February 27, 2017 in good condition and labeled as MID1702270957.

4.2. SAMPLE AND ASSEMBLY DESCRIPTION

The product was identified by the manufacturer as the following:

Type 2 EPS with facer, from Production Lot #30541, in a nominal 1" thickness.

Photos of the sample are included in Appendix B of this report.

5 TESTING AND EVALUATION METHODS

5.1. ASTM E2178-11 AIR PERMEANCE

Five (5) samples of Type 2 EPS with facer were evaluated for Air Permeance according to section 7.3 of ASTM E2178-11. Each sample was evaluated for air infiltration at six different test pressures ranging from 0.1 to 1.2 inH₂O. Once an infiltration rate was determined for a given test pressure, the sample was masked and a background leakage rate was determined for the test apparatus at that test pressure. The reported sample leakage rate is the difference of these two rates, further adjusted for sample area.

6 TESTING AND EVALUATION RESULTS

6.1. RESULTS AND OBSERVATIONS

Results of the five samples are tabulated below and plotted in figure 1. Averaged results are plotted in figure 2 and a linear regression with an r^2 value of 0.98 is included. Due to the low level of sample leakage, systematic noise has reduced the r^2 value slightly below the value of 0.99 stipulated by ASTM E2178. In our opinion, this does not affect the accuracy of the presented results.

Sample 1		Date	4/5/2017			Thickness (in)
"WC"	Masked (L/min)	UnMasked (L/min)	Sample Leakage			
			(L/min)	(L/sec)	(L/sec-m ²)	
0.1	0.05	0.07	0.02	0.00	0.000	0.971
0.2	0.07	0.10	0.03	0.00	0.001	0.959
0.3	0.09	0.14	0.05	0.00	0.001	0.973
0.4	0.11	0.18	0.07	0.00	0.001	0.968
0.6	0.16	0.25	0.09	0.00	0.002	0.965
1.2	0.27	0.41	0.14	0.00	0.003	0.963
0.4		0.18				0.968
0.3		0.13				0.981
0.2		0.10				0.979
						0.968
Average Thickness						0.970

Sample 2		Date	4/6/2017			Thickness (in)
"WC"	Masked (L/min)	UnMasked (L/min)	Sample Leakage			
			(L/min)	(L/sec)	(L/sec-m ²)	
0.1	0.05	0.07	0.02	0.00	0.000	0.969
0.2	0.08	0.11	0.03	0.00	0.001	0.968
0.3	0.11	0.15	0.04	0.00	0.001	0.980
0.4	0.13	0.19	0.06	0.00	0.001	0.981
0.6	0.17	0.26	0.09	0.00	0.002	0.975
1.2	0.27	0.42	0.15	0.00	0.003	0.971
0.4		0.18				0.970
0.3		0.15				0.958
0.2		0.11				0.961
						0.968
Average Thickness						0.970

Sample 3		Date	4/7/2017			Thickness (in)
"WC"	Masked (L/min)	UnMasked (L/min)	Sample Leakage			
			(L/min)	(L/sec)	(L/sec-m ²)	
0.1	0.05	0.07	0.02	0.00	0.000	0.980
0.2	0.08	0.11	0.03	0.00	0.001	0.968
0.3	0.10	0.15	0.05	0.00	0.001	0.963
0.4	0.12	0.19	0.07	0.00	0.001	0.965
0.6	0.16	0.26	0.10	0.00	0.002	0.966
1.2	0.28	0.43	0.15	0.00	0.003	0.967
0.4		0.18				0.971
0.3		0.15				0.975
0.2		0.11				0.973
						0.972
Average Thickness						0.970

Sample 4		Date	4/7/2017			Thickness (in)
"WC"	Masked (L/min)	UnMasked (L/min)	Sample Leakage			
			(L/min)	(L/sec)	(L/sec-m ²)	
0.1	0.06	0.08	0.02	0.00	0.000	0.963
0.2	0.08	0.11	0.03	0.00	0.001	0.965
0.3	0.10	0.15	0.05	0.00	0.001	0.971
0.4	0.13	0.19	0.06	0.00	0.001	0.972
0.6	0.17	0.26	0.09	0.00	0.002	0.969
1.2	0.27	0.42	0.15	0.00	0.003	0.977
0.4		0.18				0.973
0.3		0.15				0.959
0.2		0.11				0.981
						0.959
Average Thickness						0.969

Sample 5		Date	4/10/2017			Thickness (in)
"WC"	Masked (L/min)	UnMasked (L/min)	Sample Leakage			
			(L/min)	(L/sec)	(L/sec-m ²)	
0.1	0.05	0.07	0.02	0.00	0.000	0.977
0.2	0.07	0.10	0.03	0.00	0.001	0.971
0.3	0.09	0.14	0.05	0.00	0.001	0.963
0.4	0.11	0.18	0.07	0.00	0.001	0.965
0.6	0.15	0.25	0.10	0.00	0.002	0.969
1.2	0.27	0.42	0.15	0.00	0.003	0.959
0.4		0.18				0.966
0.3		0.14				0.967
0.2		0.08				0.980
						0.981
Average Thickness						0.970

Pressure		Leakage (L/sec- m ²)
WC	Pa	
0.1	25	0.000
0.2	50	0.001
0.3	75	0.001
0.4	100	0.001
0.6	150	0.002
1.2	300	0.003

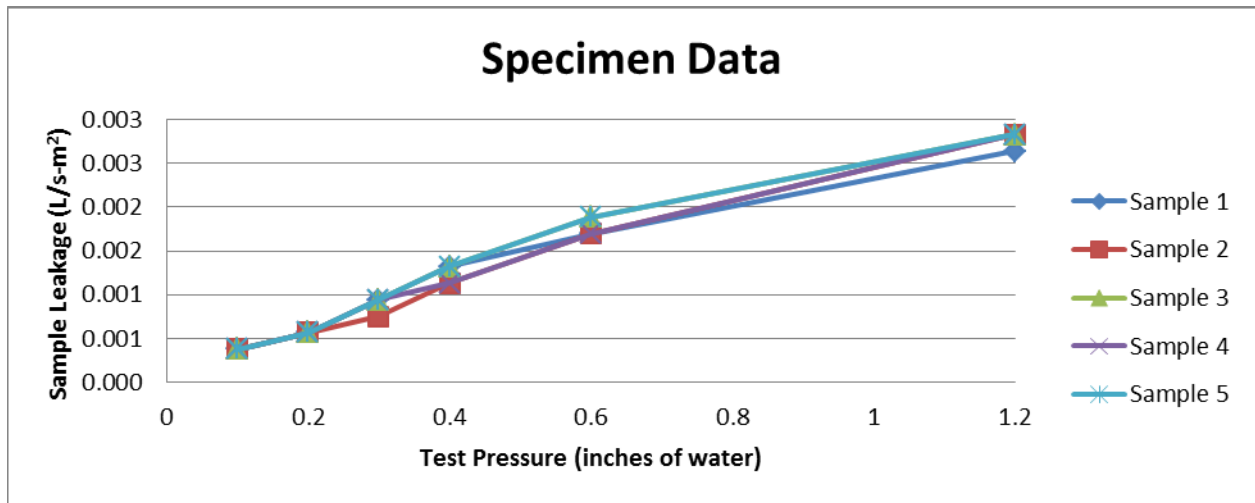


Figure 1- Compiled air permeance results

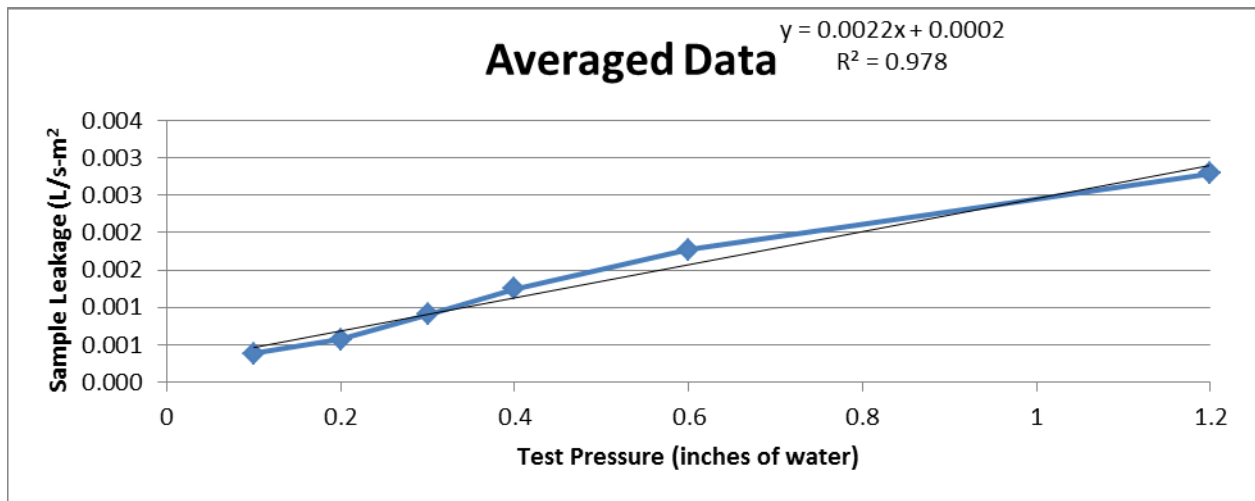


Figure 2- Averaged air permeance results

7 CONCLUSION

Intertek has conducted testing for Mansonville Plastics (BC) Ltd., on their Type 2 EPS with facer, to evaluate Air Permeance. Testing was conducted following the standard methods of ASTM E2178-11: *Standard Test Method for Air Permeance of Building Materials, Section 7.3 (Rigid Materials)*. This evaluation began April 5, 2017 and was completed April 10, 2017.

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK

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Appendix A- EQUIPMENT CALIBRATION

Equipment	Asset Number	Calibration Due
Inclined Manometer	173	07/21/2017
Mass Flow Meter	1092	04/18/2017
Caliper	5493	04/16/2017

Appendix B- PHOTOS

