



PERFORMANCE EVALUATION
OF ENVIROSHAKE ROOFING PRODUCT

1.0 INTRODUCTION

Air-Ins Inc. was mandated by "Wellington Polymer Technology Inc." to conduct the required tests on specimens of their Enviroshake Roofing Product. The tests were performed in accordance with "CCMC Technical Guide for Recycled Plastic Composite Shake, Masterformat Section: 07318.1" This product was tested for CCMC evaluation purposes.

2.0 REFERENCE STANDARDS AND DOCUMENTS

CCMC	Masterformat Section 07318.1 (Recycled Plastic Composite Shake)
DADE	PA 100-95 (Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems)
ASTM	E 661-88(1997) (Traffic load)

3.0 DESCRIPTION OF TESTED PRODUCT

Product description:	Recycled Plastic Composite Shake.
Nominal thickness:	From 4 mm to 13 mm (5/32" to 1/2")
Nominal width:	300 mm (12")
Nominal length:	500 mm (20")
Nominal exposed length:	225 mm (9")
Trade mark:	ENVIROSHAKE
Manufacturer:	Wellington Polymer Technology Inc.
Sampling:	Sampling was performed on October 24 th , 2002 at the Wellington Polymer Technology Inc. fabrication plant in Chatham, Ontario, by Mr. David Carter of Intertek Testing Services.
Tests start date:	November 11 th , 2002
Tests end date:	December 13 th , 2002



6.3 Dynamic Pressure Water Infiltration Resistance Test

6.3.1 Procedure

The test specimen was positioned on the test frame at a 1:4 slope.

The test specimen was positioned so that the exposed edge of the 2.44 m eave was facing the wind generator. The set up facilitated observer access. The topside and underside conditions of the test specimen were recorded to be 6.5 °C prior to starting the test.

The wind speed were conducted as noted below:

Interval #	Wind Speed (km/h)	Time (minutes)		
		Heat up at 50 km/h	Test	Cool down at 50 km/h
1	50		15	5
2	0		10	
3	100	5	15	4
4	0		10	
5	140	4	5	7
6	0		10	
7	170	3	5	8
8	0		10	

Water was added to the wind-stream upon commencement of the initial wind speed, upwind from the test deck, in an even spray, at a rate to simulate 220 mm/h of rainfall over the test specimen.



The flow of water was measured with a calibrated flow meter during the test procedure to confirm water flow. Water flow was stopped and started in conjunction with the airflow noted above. Inspection of the test set up was made 10 minutes after the wind speed has been reduced to 0 km/h. Photographs were taken of the top side and underside of the test specimen 30 seconds prior to the completion of each interval. The specimen was inspected for any water infiltration from the underside of deck.

6.3.2 Results

The following table illustrate the test results.

Table no. 5

Wind speed	Test duration	Results
50 km/hr	15 min	No leak and no damages
100 km/hr	15 min	No leak and no damages
140 km/hr	5 min	No leak and no damages
170 km/hr	5 min	No leak and no damages



AIR-INS inc.

Project: AI-02041-A

6.4 PHOTOGRAPHS

Photographs of the tests and specimens are given in Appendix "A".

7.0 CONCLUSION

Based on the test results, the product tested namely Enviroshake Roofing Shingles manufactured by "Wellington Polymer Technology Inc." meets the performance requirements of the CCMC Technical Guide for Recycled Plastic Composite Shake, Masterformat Section: 07318.1 with respect to Traffic load, Wind Uplift Resistance up and including 140 km/h wind velocity and Dynamic Pressure Water Infiltration Resistance up and including 170 km/h wind velocity.

Client 2 copies
CCMC 1 copy

A handwritten signature in blue ink, appearing to read 'Robert Jutras', is written over a horizontal line.

Robert Jutras P.Eng.
AIR-Ins Inc. .

Performance Evaluation: WPTI Enviroshake Shingles

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