

Date October 29, 2004

Page 1 of 3

Project No. 3063426  
Report No. 2  
Client No. 44891

**Description:** Testing of Synthetic Slate Shingles

**Client** New Group Asia Building Products Inc.  
2316 Timber Shadows, Suite 208  
Kingwood, Texas. U.S.A. 77339

Attention: Mr. Terry Lam

### Introduction

This report covers testing of synthetic slate shingles. An Intertek Testing Services representative sampled the shingles on August 16, 2004. The samples were received in new and undamaged condition on September 2, 2004. Testing was performed between the dates of September 16 and October 17, 2004.

Samples were tested for Temperature-cycling in accordance with Section 4.9 of ICBO Evaluation Service, Inc., "Acceptance Criteria for Special Roofing Systems, AC07". Temperature Cycling Tests were performed using a VWR Brand, G S Laboratory Equipment Model No. A4013U30 freezer, a Eurotherm 808 temperature controller and a D4-56 spray nozzle.

### Product Description

The product identified as synthetic slate shingles were made from recycled plastic (PEP), being flexible and embossed to emulate a slate shingle. The shingles were gray in colour with an embossed slate-like finish. The shingles measured nominally 16-3/4" (425 mm) long by 12" (305 mm) wide and were 1/8" to 1/4" (3.2 mm to 6.4 mm) thick. The top corners of the shingles were cut off at an angle, 3-1/4" (83 mm) in from the side and 2-1/2" (63.5 mm) down from the top edge. The recommended nominal exposure was 6" (152 mm) to 7-1/2" (191 mm), depending on roof slope. The dimensional coverage was approximately 6" (152 mm) by 12" (305 mm) wide to 7-1/2" (191 mm) by 12" (305 mm) wide, giving an area coverage of 0.500 ft<sup>2</sup> (0.0464 m<sup>2</sup>) to 0.625 ft<sup>2</sup> (0.0583 m<sup>2</sup>).

Contd....

1. This report is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report.
2. Only the client is authorized to copy or distribute this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.
3. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product or service is or has ever been under an Intertek certification program.



CLIENT: NEW GROUP ASIA BUILDING PRODUCTS INC.  
DATE: OCTOBER 29, 2004

- 2 of 3 -

REPORT NO: 3063426-2  
CLIENT NO: 44891

### Product Description (contd)

The shingles were complete with two 1/4" (6.4 mm) radius semi-circular shaped spacing nubs per side edge, spaced 3-3/4" (95.3 mm) apart on centre. The shingles were intended for installation over solid decking and fastened with two corrosion resistant 1-1/2" (38 mm) 10 ga. hot dipped galvanized, stainless steel, or copper roofing nails with a 3/8" (10 mm) diameter head per shingle. Recommended gap between adjacent shingles is 3/8" (9.5 mm).

A copy of the installation guide for the product stamped "Intertek Testing Services NA Ltd." is appended to this report.

### Test Methods

Temperature Cycling Tests ICBO AC07 Section 4.8

Twenty-five cycles, each cycle consisting of 1 hour of water spray exposure, (spray nozzles set at a height of 7 feet, 2134 mm, delivering 6 inches, 152 mm of water per hour), 6 hours at -40°F (-40°C), 2 hours at 70°F (21°C), 14 hours at 180°F (82°C), and 1 hour at 70°F (21°C).

Specified: Shall withstand test without crazing, cracking or suffering any other deleterious surface or joint changes. Additionally, there shall be no sign of failure or distress at fastener locations and at panel joints.

contd.....

CLIENT: NEW GROUP ASIA BUILDING PRODUCTS INC.  
DATE: OCTOBER 29, 2004 - 3 of 3 -

REPORT NO: 3063426-2  
CLIENT NO: 44891

### Observations and Results

There were no signs of any of the roofing tile samples either cracking or crazing. There were no signs of any visible changes in colour, sheen or other deleterious surface or joint changes. There was no significant deformation of the tiles. There were no signs of failure or distress at the fastener locations. There were no signs of nail pull out.

### Conclusion

The synthetic slate shingles met the conditions of acceptance of the Temperature Cycling Tests of ICBO Acceptance Criteria AC07 paragraph 9.4.2.

**Tested by:** David Wren  
**Reported by:** Vern jones

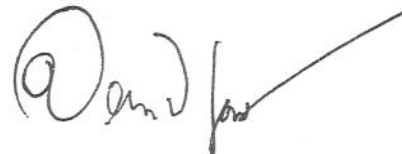
Respectfully submitted,  
**INTERTEK TESTING SERVICES NA LTD.**



David Wren, P.Eng.  
Physical Testing Services

DW/VWJ/dw  
2 cc: client  
Encl.

**Reviewed By:**



Vern W. Jones, C.E.T.  
Manager  
Physical Testing Services