



**ENGINEERING EVALUATION**

**REPORT NUMBER:130315001SHJ-BP-1R3**  
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**RENDERED TO**

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**Manufacturer**  
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**PRODUCT EVALUATED:**  
UltraShield Composite Decking

**EVALUATION PROPERTY**  
Test Summary

**Engineering Evaluation of UltraShield Renaissance Composite Decking for compliance with the applicable requirements of the relative criteria.**

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## 2 Introduction

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Intertek is conducting an engineering evaluation for NewTechWood Ltd. on UltraShield Composite Decking to evaluate properties. The evaluation is conducted to summarize the properties from the reports conducted by Intertek before. The evaluation began March 12, 2013 and was completed March 15, 2013.

## 3 Product Description

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Samples were submitted to Intertek directly from the client. Samples were not independently selected for testing.

The photographs of received samples were presented in Appendix A.

Product Description	Model
UltraShield Composite Decking	US07, UH02

## 4 Reference Documents

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As part of this evaluation, Intertek has directly used the following reference documents.

Reference report
Report No. GZ12031450-1R1 Issued on May 22, 2012 by Intertek Testing Services Ltd., Shenzhen Ltd. Guangzhou Branch
Report No. GZ12031450-2 Issued on May 21, 2012 by Intertek Testing Services Ltd., Shenzhen Ltd. Guangzhou Branch
Report No. GZ12041293-1R1 Issued on May 22, 2012 by Intertek Testing Services Ltd., Shenzhen Ltd. Guangzhou Branch
Report No. GZ12052025-1 Issued on June 7, 2012 by Intertek Testing Services Ltd., Shenzhen Ltd. Guangzhou Branch
Report No. GZ12060103-2 Issued on June 25, 2012 by Intertek Testing Services Ltd., Shenzhen Ltd. Guangzhou Branch
Report No. AU12064035-4 Issued on October 25, 2012 by Intertek Testing Services Ltd., Shanghai Jinqiao Branch

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## 5 Evaluation Method

The properties listed in the tables below come from the reports issued by Intertek before. Detailed information should be referred to initial reports.

Type	Standard	Character	Result	Report
US 07	ASTM D6109	Flexural strength (MOR)	26.3 MPa	GZ12031450-1R1
		Flexural stiffness (MOE)	2620 MPa	
	ASTM D4226	Impact resistance	MFE>396J	
	ISO 4586-2	Resistance to scratching	Rate 2 <sup>1</sup>	
	ASTM D785	Rockwell hardness (HRR)	78.7R	
	ASTM D7032	Creep-Recovery (24h)	82.2% <sup>2</sup>	
	EN 319	Surface bond quality <sup>3</sup>	>2.08 MPa	
	ASTM G21	Mould resistance (28 days)	Rating 0 <sup>4</sup>	GZ12031450-2
	ASTM D4060	Abrasion Resistance	Index 33 <sup>5</sup>	GZ12041293-1
	ASTM D1037	Moisture content before submersion	0.21%	GZ12052025-1
Moisture content after submersion		0.33%		
Water Absorption (24h)		0.12%		
Thickness swelling		0.32%		
ISO 4892-1	Weathering resistance (2000h)	$\Delta E^*=2.5$ , Grey scale 3-4	AU12064035-4	
UH02	DIN 51130	Floor slip resistance	angle:19.7° Group R11 <sup>6</sup>	GZ12060103-2

Note:

1. Rate 2: faint superficial marks at 1N force, more than 90% continues double circle of scratch marks clearly visible at 2N force.
2. The design load is 90kg. The load for Creep-Recovery is 180kg. The test span is 384mm.
3. After applying 5208N tensile force perpendicular to the plane (50mm length\*50mm width) of the board, there was no obvious abruption and damage on the surface. The surface bond quality (strength) is more than 2.08 MPa.
4. Rating 0: None (no growth on specimen surface.)
5. Weight loss after 800 cycles 27mg, Weight loss after 1000 cycles 33mg
6. Group R11: corrected mean overall acceptance angle over 19° to 27°.

## 6 Conclusion

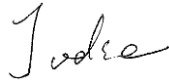
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Intertek has conducted an engineering evaluation for NewTechWood Ltd. on UltraShield Composite Decking to evaluate physical properties. The evaluation was based on the existed test reports issued before.

Based on the information contained and referenced herein, the physical properties have been summarized and presented in section 5 of this report.

The conclusions of this engineer evaluation may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

### INTERTEK



Reported by: \_\_\_\_\_

Jodie Zhou  
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# 7 Appendix A: Photos



Front view of US07



Section view of US07



Front view of UH02 (tested surface)



Section view of UH02

## 8 Revision Page

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<b>Revision No.</b>	<b>Date</b>	<b>Changes</b>	<b>Author</b>
0	March 15, 2013	First issue	Jodie Zhou
1	March 20, 2013	Modify the product description	Jodie Zhou
2	April 12, 2013	Add note to describe the bond quality test	Jodie Zhou
3	November 5, 2014	Modify the applicant name according to their statement	Jodie Zhou

**END OF DOCUMENT**

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