

# TEST REPORT



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## EVALUATION CENTER

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch  
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## RENDERED TO

Vertex Stone Trading (Shanghai) Co., Ltd.  
9F Sheng Gao International Building, No 137 Xian Xia Road,  
Chang Ning District, Shanghai, China

PRODUCT EVALUATED:  
Allure Plank 6"x36"x3.8mmx0.1mm

EVALUATION PROPERTY:  
Slip resistance, Residual Indentation, Chemical Resistance,  
Sound Reduction, Wear Resistance and Water Tightness.

**Report of Testing Allure Plank for Performance according to the  
following test method:  
DIN 51130:2004-06, BS EN 433:1994, EN 423:2001(E)  
ISO 140-8:1997(E), BS EN 660-2:1999, BSEN 649: 1997,  
BSEN 13553:2002**

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## 2 Introduction

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Intertek Guangzhou had conducted testing for Vertex Stone Trading (Shanghai) Co., Ltd. on Allure Plank to evaluate Slip resistance, Residual Indentation, Chemical Resistance, Sound Reduction, Wear Resistance, Water Tightness. Testing was conducted in accordance with client's requirements and using above standards as guide. This evaluation began Feb 21, 2008 and was completed March 5, 2008.

## 3 Test Samples

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### 3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the applicant and manufactured by Zhangjiagang Elegant Plastics Co., Ltd, located at Hexing Street, Jinfeng Town, Zhangjiagang City, Jiangsu Province, China. Samples were received at the Evaluation Center on March 4, 2008.

### 3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Model No.	Product description
3.8/0.1mm Code:TW811	Overall size: 6"X36"X3.8mm Abrasion resistance layer: thickness 0.1mm Density 1827.35 kg/m <sup>3</sup> ±50

## 4 Testing and Evaluation Methods

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### 4.1. CONDITIONING

Before tests in accordance with EN 433, EN 660-2 and EN 13553, condition the test pieces at lab more than 24 hours and constant mass already be reached

### 4.2. SPECIMEN PREPARATION

When tests in accordance with ISO 140-8, DIN 51330 and EN 13553, lay specified area per product manual guide;

Other tests were no any special specimen preparation, but cut into specified small pieces.

### 4.3. TEST STANDARD 1

DIN 51130:2004-06 Testing of floor coverings – Determination of the anti-slip properties – Workrooms and fields of activities with slip danger, walking method – Ramp test

#### **4.4. TEST STANDARD 2**

BS EN 433:1994 resilient floor coverings – Determination of residual indentation after static loading

#### **4.5. TEST STANDARD 3**

EN 423:2001(E) Resilient floor coverings - Determination of resistance to staining

#### **4.6. TEST STANDARD 4**

ISO 140-8:1997(E) Acoustics -Measurement of sound insulation in buildings and of building elements - Part 8: Laboratory measurements of the reduction of transmitted impact noise by floor coverings on a heavyweight standard floor

#### **4.7. TEST STANDARD 5**

BS EN 660-2:1999 Resilient floor coverings-Determination of wear resistance - Part 2: Frick - Taber test

#### **4.8. TEST STANDARD 6**

BSEN 649: 1997 Resilient floor coverings-Homogenous and heterogeneous polyvinyl chloride floor coverings Specification

#### **4.9. TEST STANDARD 7**

BSEN 13553:2002 Resilient floor coverings-Polyvinyl chloride floor coverings for use in special wet areas -Specification

## 5 Testing and Evaluation Results

### 5.1. RESULTS AND OBSERVATIONS

Item	Requirement-Test	Result - Remark	Verdict
Slip resistance	Measured as DIN 51130 specified. (100±1) ml of the engine lubricating oil of SAE viscosity class 10 W 30 shall be evenly spread over the surface of the test finishing. The outsole of the shoe shall be moistened with the same lubricant. The test person shall proceed with half a shoe length, forwards and backwards on the test finishing. The pitch of the test finishing is increased from the horizontal at a rate of around 1 °/s. The angle of inclination is obtained by repeated travel up and down around the critical range. The acceptance angle of the test finishing is determined three times. The final result of the test by two persons is the corrected mean overall acceptance angles	Corrected mean overall acceptance angle: 29°  Slip resistance assessment group: R12	—
Residual Indentation	BS EN 433 A test piece is subjected to a static loading, the thickness being measured before loading and after various recovery periods.  The residual indentation (average) shall be within 0.1mm according to requirement of BSEN 649	Residual indentation Average: 0.08 mm	P
Chemical Resistance	EN 423 Test chemical substances:  Ethanol Solution, Acetone, Household ammonia, 10% Citric acid, Vegetable oil, Coffee, Tea, Catsup, Mustard, 10% Povidone iodine, #2B pencil, Wax crayon, Black paste shoe polish	10% Povidone iodine: Index 1 Other substances: Index 0	—

Item	Requirement-Test	Result - Remark		Verdict													
Sound Reduction	ISO 140-8 Two vertically adjacent rooms are used, the upper one being designated the "source room" and the lower one the "receiving room". They are separated by a standard floor on which the floor covering under test is installed. The airborne sound insulation between source room and receiving room shall be such that the level of airborne sound transmission from source room to receiving room will be at least 10 dB below the level of transmitted impact sound in each frequency band.	Frequency (Hz)	$\Delta L$ (dB)	—													
		100	-3.4		—												
		125	-2.7			—											
		160	-0.6				—										
		200	1.2					—									
		250	2.6						—								
		315	2.4							—							
		400	0.6								—						
		500	0.8									—					
		630	1.2										—				
		800	1.7											—			
		1K	2.0												—		
		1.25K	2.2													—	
		1.6K	2.3														—
		2K	2.6														
2.5K	2.3	—															
3.15K	3.0		—														
4K	4.1			—													
5K	5.6				—												
Wear Resistance	BS EN 660-2 A specimen testing on a horizontal, rotating holder table is sprinkled with abrasive grains and loaded with a pair of leather-clad abrading wheels, each of which is freely rolling round a horizontal axis.  $F_m$ is the average mass loss in milligrams per 100 revolutions.  The wear loss in cubic millimeters $F_v$ is equal to the quotient of the final mass loss in milligrams and the density of the wear layer in grams per cubic centimeter.					$F_m=0.6$ mg $F_v=0.32$ mm <sup>3</sup>	—										

Item	Requirement-Test	Result - Remark	Verdict
Water Tightness	EN13553-2002 Place the test specimen on the indicator paper with the use surface side upwards. Place the box over the test specimen and press the support towards the box to ensure water tightness. Fill the box with water to a level of 200 mm $\pm$ 10 mm above the upper surface of the test specimen. This water level is maintained for 24 h $\pm$ 1 h after which the water is drained off. The test specimen is considered watertight if there is no sign of penetrating water.	No sign of penetrating water after the water was maintained for 24 hours.	P

## 5.2. EXAMINATION OF RESULTS

Unless otherwise stated in the report, all portions of each test were performed under continuous, direct supervision of the representative of Intertek Guangzhou.

## 6 Conclusion

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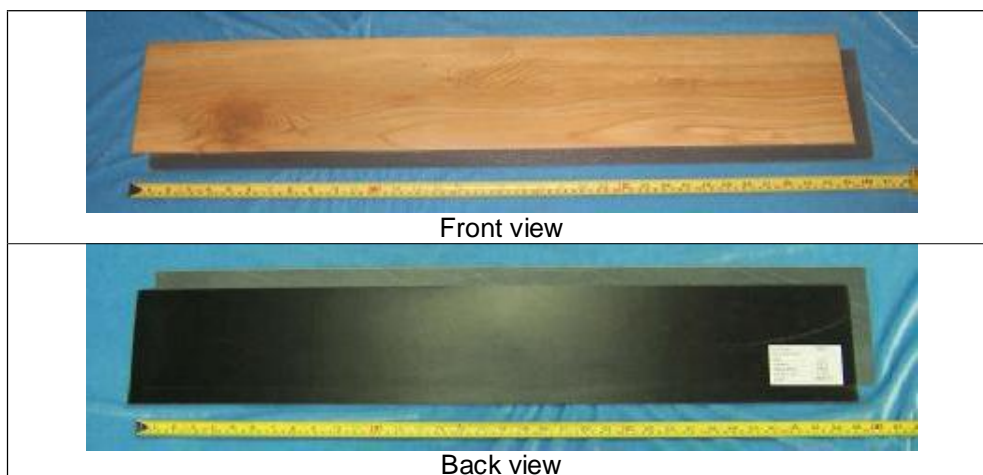
Refer to above results and observations.

### INTERTEK GUANGZHOU

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**Appendix A**  
**Product photos**



Remarks:

1. Slip resistance (DIN 51330): Group definition

<b>Corrected mean overall acceptance angle</b> $\alpha_{ave}$	<b>Slip resistance assessment group</b>
3° to 10°	R 9
over 10° to 19°	R 10
over 19° to 27°	R 11
over 27° to 35°	R 12
over 35°	R 13

2. ISO 140-8 Sound Reduction: Positive numbers are the noise (db) reduced by the product, negative number means no reduction. The greater the number, the better.
3. Wear Resistance (EN649): Group T is the best class and F is the least class. The result is Class T.

**Table 2 — Classification requirements for wear groups**

Characteristic	Requirements for wear group				Test method
	T	P	M	F	
Thickness loss $\Delta l$ mm	$\Delta l \leq 0,08^{1)}$	$0,08 < \Delta l \leq 0,15$	$0,15 < \Delta l \leq 0,30$	$0,30 < \Delta l \leq 0,60$	prEN 660-1
Volume loss $F_v$ mm <sup>3</sup>	$F_v \leq 2,0^{1)}$	$2,0 < F_v \leq 4,0$	$4,0 < F_v \leq 7,5$	$7,5 < F_v \leq 15,0$	pr EN 660-2

<sup>1)</sup> If tested for verification.