

# Anhui Sentai WPC TEC Flooring Co., Ltd

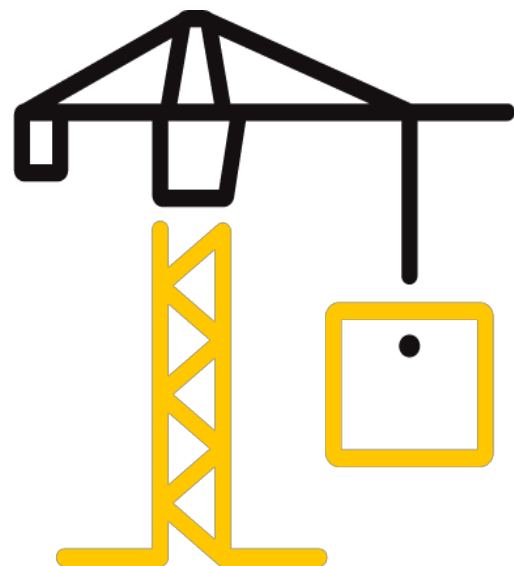
## TEST REPORT

**REPORT NUMBER**  
180314008SHF-BP-3

**ISSUE DATE**  
2018/6/27

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17

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## Test Report

Issue Date: 2018/6/27 Intertek Report No. 180314008SHF-BP-3

Applicant: Anhui Sentai WPC TEC Flooring Co., Ltd

Applicant Address: Guohua Road, Economic and Technoloy Develoment Area of Guangde County,  
242237, Anhui Province, China

Attn: Kang Fan

**SUBJECT:** Performance testing  
Foamed PVC co-extruded outdoor decking

Dear Sir,

This test report represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following standards:

TEST METHODS AND STANDARDS
Refer to the next following Pages.

SAMPLE ID	MODEL	SPECIFICATION
S180314008SHF.001~011	STPVB102	140*24

SAMPLE RECEIEVED: 2018/3/6  
TESTED FROM: 2018/3/14 TO 2018/6/27

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## Test Report

Issue Date: 2018/6/27

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### Test Items, Method and Results:

Test Item: Abrasion/Wear resistance

Test Method: ASTM D4060-14

Conditioning: Condition the test specimens at (23±2)°C and (50±5)% relative humidity for at least 24h

Test Condition:

Rotation frequency: 60 r/min

Abrasive wheels: CS-17

Load on each wheel: 1000 g

Test revolutions: 1000 r

Test Result:

Parameter	Specimen 1	Specimen 2	Specimen 3
Mass/Weight loss, (mg)	119.1	114.9	114.1
Average value, (mg)	116.0		

Note:

1. Abbreviation "r" = revolutions/cycles
2. Test conditions were specified by client.

## Test Report

Issue Date: 2018/6/27

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**Test Items, Method and Results:**

Test Item: Flexural properties

Sample Condition: 40 hours at a temperature of 23±2°C and relative humidity of 50±5%

Test Span: 300mm

Test Items	Test Method	Test Results
Flexural Properties	ASTM D7032-17 Section 4.4 ASTM D6109-13	Flexural strength at 3% strain: 22.0 MPa
		Flexural Stiffness (MOE): 1433 MPa

## Test Report

Issue Date: 2018/6/27

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**Test Items, Method and Results:**

Test Item: Freeze-thaw resistance

Sample Condition: Three cycles of water submersion, freezing and thawing.

Test Span: 300mm

Test Items	Test Method	Test Results
Freeze-thaw Resistance	ASTM D7031-11 Section 5.20 ASTM D6109-13	Flexural strength at 3% strain: 22.6 MPa
		Change rate: 2.7 %
		Flexural Stiffness (MOE): 1368 MPa
		Change rate: -4.5 %

**Note:**

Three cycles, exposure cycle condition:

- 1) Submerge underwater for 24 hours
- 2) Place in a freezer at -29°C for 24 hours
- 3) Return to room temperature for 24 hours

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**Test Items, Method and Results:**

Test Item: High temperature effect

Sample Condition: 40 hours at a temperature of 23±2°C and relative humidity of 50±5%

Test Condition: High temperature conditioning at 52±2°C for not less than 48 hours

Test Span: 300mm

Test Items	Test Method	Test Results
High temperature effect	ASTM D7032-17 Section 4.5.1 ASTM D6109-13	Flexural strength at 3% strain: 19.5 MPa
		Change rate: -11.4 %
		Flexural Stiffness (MOE): 1204 MPa
		Change rate: -16.0 %

## Test Report

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**Test Items, Method and Results:**

Test Item: Low temperature effect

Sample Condition: 40 hours at a temperature of 23±2°C and relative humidity of 50±5%

Test Condition: Low temperature conditioning at -29±2°C for not less than 48 hours

Test Span: 300mm

Test Items	Test Method	Test Results		
Low temperature effect	ASTM D7032-17 Section 4.5.1 ASTM D6109-13	Flexural strength (MOR):	31.1	MPa
		Change rate:	41.4	%
		Flexural Stiffness (MOE):	2047	MPa
		Change rate:	42.8	%

## Test Report

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**Test Items, Method and Results:**

Test Item: Moisture effect

Sample Condition: 40 hours at a temperature of 23±2°C and relative humidity of 50±5%

Test Condition: Submerged in water to at a temperature of 23±2°C for not less than 48 hours

Test Span: 300mm

Test Items	Test Method	Test Results	
Moisture effect	ASTM D7032-17 Section 4.5.1 ASTM D6109-13	Flexural strength (MOR):	24.6 MPa
		Change rate:	11.8 %
		Flexural Stiffness (MOE):	1644 MPa
		Change rate:	14.7 %



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**Test Items, Method and Results:**

Test Item: Creep recovery

Sample Condition: 40 hours at a temperature of 23±2°C and relative humidity of 50±5%

Test Condition: The load was applied for 24 hours and the specimens were allowed to recover with no superimposed load for 24 hours.

Test Span: 300mm

Test Load: 302N

Test Items	Test Method	Test Results
Creep Ccovery	ASTM D7032-17 Section 5.4	Unrecovered deflection: 0.09 mm
		Creep recovery: 89 %

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**Test Items, Method and Results:**

Test Item: Mechanical fastener holding

Sample Condition: 40 hours at a temperature of 23±2°C and relative humidity of 50±5%

Fastener type: 1-in. (25 mm) No. 10-gage flathead low-carbon-steel wood screws

Test Items	Test Method	Test Results
Mechanical Fastener Holding	ASTM D7032-17 Section 5.5 ASTM D1761-12	Mean withdraw force: 1350 N

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**Test Items, Method and Results:**

Test Item: Moisture absorption and thickness swell

Sample Condition: Full cross section

Test Condition: Submersion in water at 23°C

Submersion Time: 24h

Test Items	Test Method	Test Results		
Moisture Absorption and Thickness Swell	ASTM D7031-11 Section 5.19	Water absorption:	1.12	%
	ASTM D1037-12	Thickness swell:	0.09	%

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**Test Items, Method and Results :**

Test Items	Test Method	Test Results
Flexural Strength	ASTM D790-17	Flexural Strength (MOR): 23.6 MPa
Flexural Modulus		Flexural Modulus (MOE): 1554 MPa

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**Test Items, Method and Results:**

Test Item: Flexural properties  
 Condition: ASTM G154-16 cycle 1 for 2000 hours  
 Test Span: 300mm

Test Items	Test Method	Test Results
Flexural Properties	ASTM G154-16 Cycle 1 ASTM D790-17	Flexural Strength (MOR): 26.0 MPa
		Flexural Modulus (MOE): 1640 MPa

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**Test Items, Method and Results :**

Test Items	Test Method	Test Results
Moisture Content	ASTM D4442-15	0.35%

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### Test Items, Method and Results :

Test Items	Test Method	Test Results
Coefficient of Thermal Expansion	ASTM D696-16	$46.2 \times 10^{-6} \text{ mm/mm/}^{\circ}\text{C}$

**Note:**

1. The test temperature was from -30°C (-22°F) to 30°C (86°F)

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### Test Items, Method and Results :

Test Items	Test Method	Test Results
Tensile Test	ASTM D638-2014	Flexural Strength: 25.2 MPa



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**APPENDIX: SAMPLE RECEIVED PHOTO**



**REPORT AUTHORIZED**

When signed with physical or electronic signature, the contents of this report have been prepared and approved per Intertek's quality process in accordance with ISO 17025.


  
*Daniel Zhang*      *Kyle Wang*
  
 Name: Daniel Zhang      Name: Kyle Wang
   
 Title: Reviewer      Title: Project Engineer

**Revision:**

NO.	DATE	CHANGES	AUTHOR	REVIEWER
180314008SHF-BP-3	2018/6/27	First issue	Kyle Wang	Daniel Zhang