Nanjing Xuhua Sundi New Building Materials Co., Ltd

TEST REPORT

SCOPE OF WORK
Wood Plastic Composites (WPC)

REPORT NUMBER
240115009SHF-001

TEST DATE(S)
2024-01-15 - 2024-03-20

ORIGINAL ISSUE DATE
2024-03-20

PAGES
12

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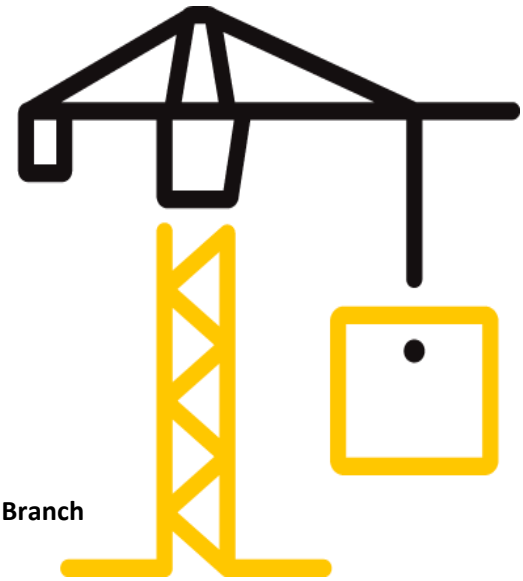

Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch

Test Report

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9.The report was digital signed by Shang Hai, Intertek Group plc, please using Adobe Acrobat Reader to verify the authenticity.

Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch
Plant 5, No. 6958 Daye Road, Fengxian District, Shanghai, China
Tel: +86 21-61136116 Fax: 021-61189921
Website: www.intertek.com

Test Report

Original Issue Date: 2024-03-20 Intertek Report No. 240115009SHF-001

Applicant: Nanjing Xuhua Sundi New Building Materials Co., Ltd

Address: No.65, Xiushan Road, Economic Development Zone of Gaochun District, Nanjing City, Jiangsu Province, China

Attn: Changcheng Ma

Manufacturer: Nanjing Xuhua Sundi New Building Materials Co., Ltd

Address: No.65, Xiushan Road, Economic Development Zone of Gaochun District, Nanjing City, Jiangsu Province, China

Test Type: Performance test, samples provided by the applicant.

Product Information

Product Name	Model	Specification
Wood Plastic Composites (WPC)	SLD 140×25	140×25
Sample ID	**Sample Amount**	**Sample Received Date**
S240115009SHF.001~006, 008~009	15pcs	2024-01-15
Sample Description		**Brand**
140mm×25mm		sundiwpc

Test Methods And Standards

Test Standard	EN 15534-4:2014 Section 4.4, 4.5.2, 4.5.5, 4.5.7 EN 15534-1:2014 Section 6.4.2, 7.5, 8.3.1, 8.3.3, 8.6, Annex A EN 15534-1:2014+A1:2017 Section 6.2 CEN/TS 15676:2007, ISO 1183-1:2019 Method A, EN ISO 9227:2022 RoHS Directive 2011/65/EU and (EU) 2015/863
Specification Standard	EN 15534-4:2014
Test Conclusion	The samples were tested according to the above standards, and the results are shown in the following page.

Note:
1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized

Name: Flora Fan
Title: Reviewer

Name: Erin Huang
Title: Project Engineer

Test Report

Original Issue Date: 2024-03-20 Intertek Report No. 240115009SHF-001

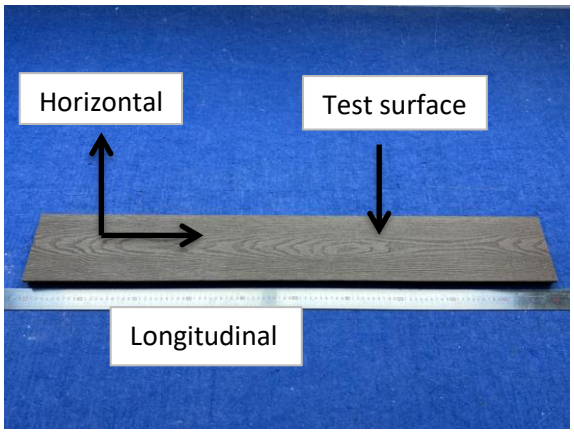
Test Items, Method and Results:

EN 15534-4:2014 Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) Part 4: Specifications for decking profiles and tiles

Test Items	Test Method	Test Results	Test requirements	Verdict
Slipperiness (Pendulum test)	EN 15534-4:2014 Section 4.4 EN 15534-1:2014 Section 6.4.2 CEN/TS 15676:2007	Surface condition: Dry Longitudinal direction: Mean: 70 Min.: 68 Horizontal direction: Mean: 80 Min.: 80	Pendulum value≥36	Pass
Slipperiness (Pendulum test)	EN 15534-4:2014 Section 4.4 EN 15534-1:2014 Section 6.4.2 CEN/TS 15676:2007	Surface condition: Wet Longitudinal direction: Mean: 52 Min.: 50 Horizontal direction: Mean: 55 Min.: 54	Pendulum value≥36	Pass

Note:

1. Test surface and direction please refer to below picture.



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Test Items, Method and Results:

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Test Items	Test Method	Test Results	Test requirements	Verdict
Flexural properties	EN 15534-4:2014 Section 4.5.2 EN 15534-1:2014 Annex A	Bending Strength: 26.2 MPa Modulus of elasiticity: 3350 MPa Maximum load: Mean: 4193 N Min.: 3757 N Deflection at 500N: Mean: 1.16 mm Max.: 1.63 mm	Flexural properties -F'max: Mean ≥ 3300 N Min. ≥ 3000 N -Deflection under a load of 500 N: Mean ≤ 2,0 mm Max. ≤ 2,5 mm	Pass

Note:

1. The test span was 350 mm offered by applicant.

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Test Items	Test Method	Test Results	Test requirements	Verdict
Swelling and water absorption (28 days immersion)	EN 15534-4:2014 Section 4.5.5 EN 15534-1:2014 Section 8.3.1	Mean Swelling: 0.33 % in thickness 0.07 % in width 0.07 % in length Max. Swelling: 0.37 % in thickness 0.08 % in width 0.08 % in length Water absorption: Mean: 1.21 % Max.: 1.23 %	Means swelling: ≤ 4 % in thickness ≤ 0,8 % in width ≤ 0,4 % in length Max. swelling: ≤ 5 % in thickness ≤ 1,2 % in width ≤ 0,6 % in length Water absorption: Mean≤7 % Max.≤9 %	Pass

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Test Items	Test Method	Test Results	Test requirements	Verdict
Boiling Test	EN 15534-4:2014 Section 4.5.5 EN 15534-1:2014 Section 8.3.3	Water absorption in weight: Mean: 1.50 % Max.: 1.54 %	Water absorption in weight: Mean ≤ 7% Max. ≤ 9%	Pass

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Test Items, Method and Results:

EN 15534-4:2014 Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) Part 4: Specifications for decking profiles and tiles

Indenter: a hardened steel spherical body with diameter of 10 mm

Test load: Additional load of 2000N with preload of 20N

Indentation time: (25 ± 5) s

Recovery time: at least 24h

Test Items	Test Method	Test Results	
Resistance to indentation	EN 15534-4:2014 Section 4.5.7 EN 15534-1:2014 Section 7.5	Brinell hardness:	71.0 MPa
		Rate of elastic recovery:	57.9 %

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Test Items, Method and Results:

EN 15534-4:2014 Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) Part 4: Specifications for decking profiles and tiles

Test Parameters:

1). Sodium chloride (NaCl) solution concentration: (50±5) g/L

2). pH Value (collected solution): 6.5~7.2

3). Chamber temperature: (35 ± 2) °C

Test Duration: 96 hours

Test Items	Test Method	Test Results	
Resistance to salt spray (NSS test)	EN 15534-4:2014 Section 4.5.7 EN 15534-1:2014 Section 8.6 EN ISO 9227:2022	Exposure time (h):	96
		△L*=	0.86
		△a*=	-0.38
		△b*=	0.80
		△E*=	1.61
		Grey Sale=	4

Test Photo:

Test Report

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Test Items, Method and Results:

Test Item: Density

Condition: 96 hours at a temperature of 23±2°C and relative humidity of 50±5%

Test Item	Test Method	Test Result
Density	EN 15534-1:2014+A1:2017 Section 6.2 ISO 1183-1:2019 Method A	1.402 g/cm^3

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Test Items, Method and Results：

Test Item: RoHS chemical test

Test Result:

Test Items	Limits	Test Result (mg/kg)
Cadmium (Cd)	0.01%(100mg/kg)	ND
Lead (Pb)	0.1%(1000mg/kg)	ND
Mercury (Hg)	0.1%(1000mg/kg)	ND
Chromium (VI) (Cr^{6+})	0.1%(1000mg/kg)	ND

Remark:

1. mg/kg = milligram per kilogram
2. ND = Not Detected
3. The above limits were quoted from 2011/65/EU and (EU) 2015/863 for homogeneous material.
4. Test location: Central Chemical Lab of Intertek Testing Services Ltd., Wuxi
Address: No. 8, Fubei Road, Xishan Economic Development Zone, Wuxi, China

Test Method:

Test item	Test method	Report Limit
Cadmium (Cd)	With reference to IEC 62321-5 Edition 1.0: 2013, by acid digestion until the tested sample was totally dissolved and determined by ICP-OES	2 mg/kg
Lead (Pb)	With reference to IEC 62321-5 Edition 1.0: 2013, by acid digestion until the tested sample was totally dissolved and determined by ICP-OES	2 mg/kg
Mercury (Hg)	With reference to IEC 62321-4 Edition 1.1: 2017, by acid digestion until the tested sample was totally dissolved and determined by ICP - OES	2 mg/kg
Chromium (VI) (Cr^{6+})	With reference to IEC 623217-2 Edition 1.0: 2017, by alkaline digestion and determined by UV-VIS Spectrophotometer	10 mg/kg

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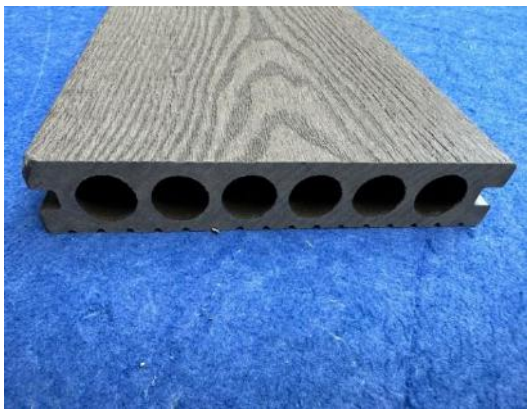
Appendix A: Sample Received Photo

Front view

Back view



Section view

Revision:

NO.	Date	Changes
240115009SHF-001	2024-03-20	First issue