SHANDONG LVSEN WOOD-PLASTIC COMPOSITE CO., LTD

TEST REPORT

SCOPE OF WORK
WPC Co-extrusion Solid Decking

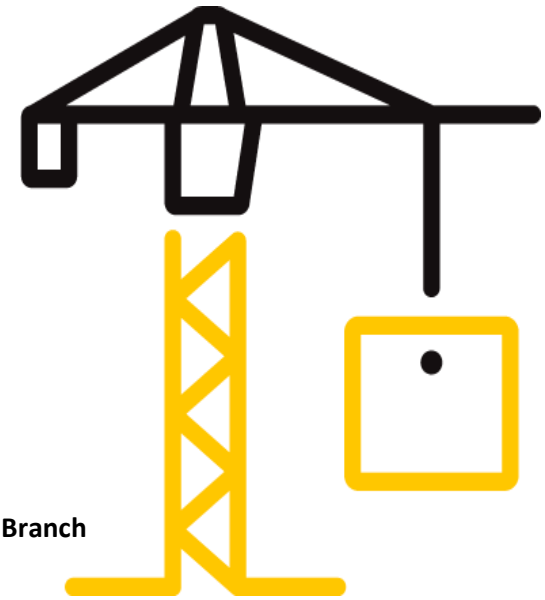
REPORT NUMBER
241219009SHF-007

TEST DATE(S)
2025-01-02 - 2025-02-10

ORIGINAL ISSUE DATE
2025-02-10

PAGES
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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch

Test Report

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Test Report

Original Issue Date: 2025-02-10 Intertek Report No. 241219009SHF-007

Applicant: SHANDONG LVSEN WOOD-PLASTIC COMPOSITE CO., LTD

Address: NANLING VILLAGE, GAOQIAO TOWN, YISHUI COUNTY, LINYI CITY, SHANDONG PROVINCE, CHINA

Attn: Yun Zhang

Manufacturer: SHANDONG LVSEN WOOD-PLASTIC COMPOSITE CO., LTD

Address: NANLING VILLAGE, GAOQIAO TOWN, YISHUI COUNTY, LINYI CITY, SHANDONG PROVINCE, CHINA

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

Product Information

Product Name	Model	Specification
WPC Co-extrusion Solid Decking	LSSD02	140x22 mm
Sample ID	**Sample Amount**	**Sample Received Date**
S241219009SHF.007~011	20 pcs	2025-01-02
Sample Description		**Brand**
140mm×22mm		Lvsenwood

Test Methods And Standards

Test Standard	EN 15534-4:2014 Section 4.4, 4.5.1, 4.5.5, 4.5.6, 4.5.7 EN 15534-1:2014 Section 6.4.2, 7.1.2.1, 7.5, 8.3.1, 9.2 CEN/TS 15676:2007, ISO 11359-2:2021 Method A
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: Daniel Zhang Name: Erin Huang

Title: Reviewer Title: Project Engineer

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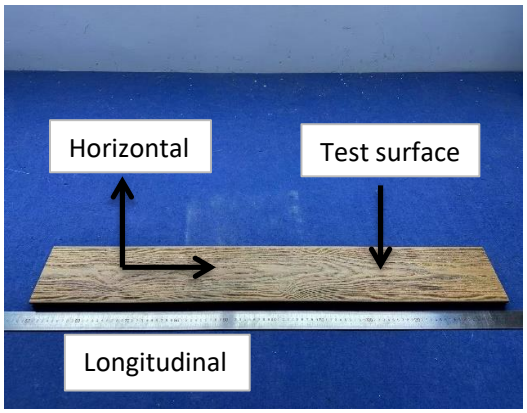
Test Items, Method and Results:

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 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: 80 Min.: 65 Horizontal direction: Mean: 88 Min.: 80	Pendulum value≥36	Pass

Note:

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



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Test Items	Test Method	Test Results	Test requirements	Verdict
Falling mass impact resistance	EN 15534-4:2014 Section 4.5.1 EN 15534-1:2014 Section 7.1.2.1	Type: Solid profile Max. Crack length (mm): No crack Max. Residual Indentation (mm): 0.11	None of 10 test specimens shall show a failure with a depth of residual indentation ≥ 0,5 mm.	Pass

Note:

1. The falling mass was 1000g and the height was 700mm.

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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 0.03 % in width 0.08 % in length Max. Swelling: 0.37 % in thickness 0.04 % in width 0.09 % in length Water absorption: Mean: 0.28 % Max.: 0.28 %	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, Method and Results:

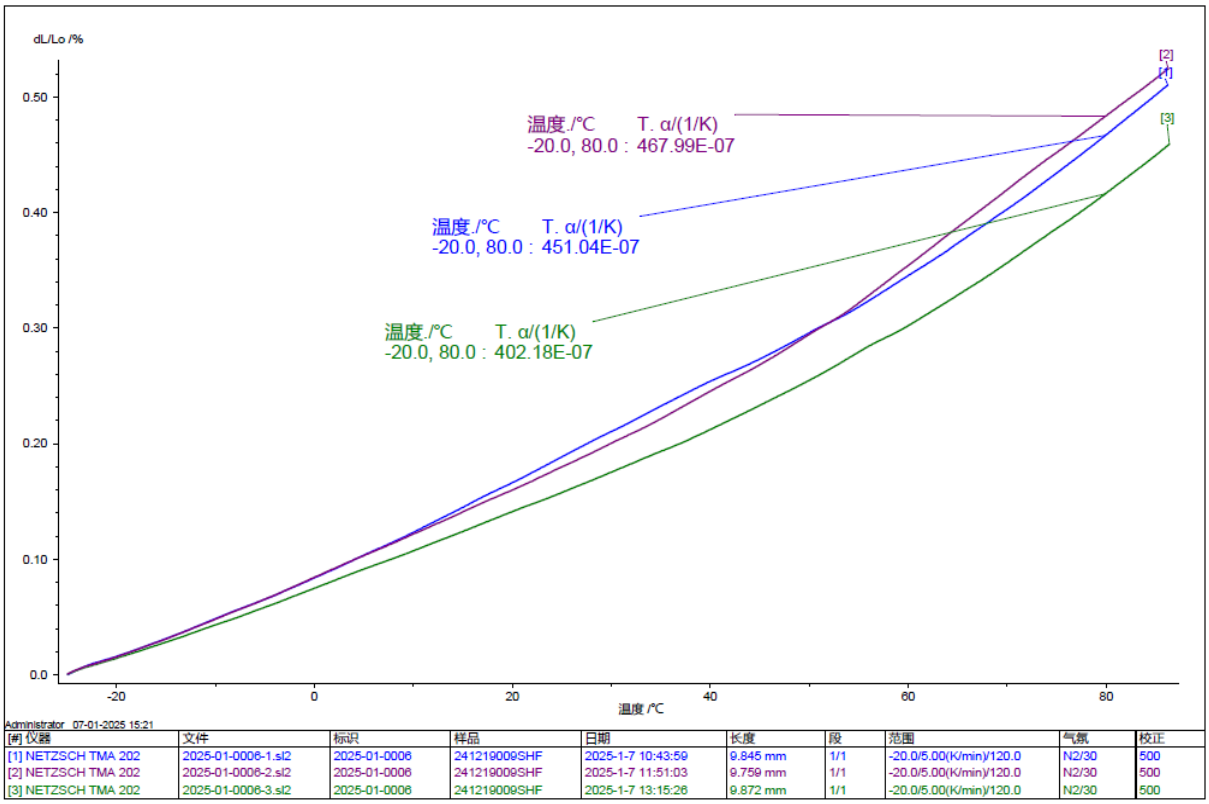
EN 15534-4:2014 Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) Part 4: Specifications for decking profiles and tiles

Test Items	Test Method	Test Results	Test requirements	Verdict
Linear thermal expansion coefficient	EN 15534-4:2014 Section 4.5.6 EN 15534-1:2014 Section 9.2 ISO 11359-2:2021 Method A	Temperature range: -20°C~80°C Mean: Longitudinal direction 44 $\cdot 10^{-6}$ K^{-1}	≤ 50·10^{-6} K^{-1}	Pass

Note:

1. Test item is subcontracted on accreditation by CNAS L2233.

Test graph:



[#] 仪器	文件	标识	样品	日期	长度	段	范围	气氛	校正
[1] NETZSCH TMA 202	2025-01-0006-1.sl2	2025-01-0006	241219009SHF	2025-1-7 10:43:59	9.845 mm	1/1	-20.0/5.00(K/min)/120.0	N2/30	500
[2] NETZSCH TMA 202	2025-01-0006-2.sl2	2025-01-0006	241219009SHF	2025-1-7 11:51:03	9.759 mm	1/1	-20.0/5.00(K/min)/120.0	N2/30	500
[3] NETZSCH TMA 202	2025-01-0006-3.sl2	2025-01-0006	241219009SHF	2025-1-7 13:15:26	9.872 mm	1/1	-20.0/5.00(K/min)/120.0	N2/30	500

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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:	59 MPa
		Rate of elastic recovery:	49 %

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Appendix A: Sample Received Photo



Front view



Back view



Section view

Revision:

NO.	Date	Changes
241219009SHF-007	2025-02-10	First issue