



**Test Report**

**No. VNHL2602004931HG-01**

**Date: April 03, 2026**

**Page 1 of 8**

*This report cancels and supersedes the report No. VNHL2602004931HG-01 dated March 24, 2026 issued by SGS Vietnam*

**HPLY VIETNAM COMPANY LIMITED.**

TANG 5, SO 564 NGUYEN VAN CU, PHUONG BO DE, TP.HA NOI, VIET NAM

The following sample(s) was/were submitted and identified by the client as:

- SGS Job No. : VNHL2602004931HG
- Sample Description : PRO FORMPLY
- Color : DARK BROWN
- Characteristic : Eucalyptus core EV veneer underneath PSF Dynea PSF 135gsm Phenolic glue
- Item/Style# : "FILM FACED PLYWOOD (VAN EP PHU PHIM)"
- Date of Production : 11/2/2026
- Country of Origin : VIETNAM
- Country of Destination : EUROPEAN UNION, AUSTRALIA, AFRICA

As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

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- Sample Receiving Date : FEBRUARY 26, 2026
- Final Confirmed Date : FEBRUARY 26, 2026
- Testing Period : FEBRUARY 26, 2026 TO MARCH 24, 2026
- Test Requested : PLEASE REFER TO THE RESULT SUMMARY
- Test Results : PLEASE REFER TO NEXT PAGES

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Result Summary :

Test Requested	Conclusion
Formaldehyde emission by chamber method	See Result
Density	See Result
Bending test	See Result
Swelling in thickness after immersion in water for 24 h	See Result
Resistance to surface wear	See Result
Bonding quality – As client's requirement	PASS

Signed for and on behalf of  
**SGS Vietnam LTD**



**Ung Thanh Van**  
Hardline SBU Manager

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**Test Result(s):**

**Formaldehyde emission by chamber method**

Test Method: With reference to BS EN 717-1:2004. Analysis was performed by UV-VIS.

Test Item	Result (mg/m <sup>3</sup> )	Reporting Limit (mg/m <sup>3</sup> )
	1	
Formaldehyde emission (in air)	ND	0.04

**Sample Description:**

1 BROWN COMPOSITE WOOD (PLYWOOD CORE) (18MM) WITH NON WOOD SURFACE

- Note:
- 1. mg/m<sup>3</sup> = milligram per cubic meter
  - 2. ND = Not Detected
  - 3. 0.1 mL/m<sup>3</sup> = 0.124 mg/m<sup>3</sup>
  - Class E1 Requirement: ≤ 0.124 mg/m<sup>3</sup> air
  - Class E2 Requirement: > 0.124 mg/m<sup>3</sup> air

Characteristic	Unit	Test method	Test result
			A
1. Density (*)	kg/m <sup>3</sup>	BS EN 323 : 1993	581
2. Bending test (*) (a)			
• Bending strength	N/mm <sup>2</sup>	BS EN 310 : 1993	44.3
• Modulus of elasticity in bending	N/mm <sup>2</sup>		5585
3. Swelling in thickness after immersion in water for 24 h (*)	%	BS EN 317 : 1993	1.4
4. Resistance to surface wear			
• Mean value of initial wear point (IP)	revolutions	BS EN 438-2: 2016	550

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Characteristic	Test method	Test result		Remark
		A		
5. Bonding quality (*) (b) (Shear strength)	BS EN 314-2 : 1993 - Class 3 & BS EN 314-1 : 2004	Mean shear strength ( $f_v$ ) (N/mm <sup>2</sup> )	Mean apparent cohesive wood failure percentage (%)	
• Pre-treatment 5.1.1		2.06	80	Accept
• Pre-treatment 5.1.3		1.03	45	Accept
• Pre-treatment 5.1.4		1.17	70	Accept

**Requirements:** The relationship between the mean percentage of apparent cohesive wood failure and the mean shear strength given in Table 2 - BS EN 314-2 : 1993.

Mean shear strength $f_v$ (N/mm <sup>2</sup> )	Mean apparent cohesive wood failure $w$ (%)
$0.2 \leq f_v < 0.4$	$\geq 80$
$0.4 \leq f_v < 0.6$	$\geq 60$
$0.6 \leq f_v < 1.0$	$\geq 40$
$1.0 \leq f_v$	no requirement

Sample description:

A PRO FORMPLY

- Note:
1. Lab environmental conditions: (20 ± 2) °C; (65 ± 5) %RH.
  2. (a) Span: 360 mm. Test speed: 15 mm/min.
  3. (b) Pre-treatments:
    - 5.1.1 Immersion for 24 h in water at (20 ± 3) °C.
    - 5.1.3 Immersion for 4 h in boiling water, then drying in the ventilated drying oven for 16 h to 20 h at (60 ± 3) °C, then immersion in boiling water for 4 h, followed by cooling in water at (20 ± 3) °C for at least 1 h.
    - 5.1.4 Immersion for (72 ± 1) h in boiling water, followed by cooling in water at (20 ± 3) °C for at least 1 h.

Remark: (\*) This / these test(s) was / were accredited ISO 17025:2017 by VILAS.  
The test results are considered as conform to specification based on the general consideration simple acceptance as stated in ISO/IEC GUIDE 98-4:2012.

**Test details of Bonding quality:**
**1. Immersion for 24 h in water at  $(20 \pm 3)$  °C**

Specimen No.	$l_1$	$b_1$	$F$	$f_v$	Wood failure
	(mm)	(mm)	(N)	(N/mm <sup>2</sup> )	(%)
1	25.26	25.17	1255.5	1.98	40
2	25.29	25.04	1254.7	1.98	90
3	25.09	24.88	1097.8	1.76	100
4	25.17	25.42	1559.3	2.44	100
5	25.45	25.16	1532.6	2.39	90
6	25.48	25.13	1081.6	1.69	40
7	25.36	24.90	1260.5	2.00	100
8	25.30	25.11	1168.1	1.84	90
9	25.34	24.97	1537.7	2.43	60
10	24.89	25.16	1301.9	2.08	100
Average	25.26	25.09	1305.0	2.06	80

**2. Immersion for 4 h in boiling water, then drying in the ventilated drying oven for 16 h to 20 h at  $(60 \pm 3)$  °C, then immersion in boiling water for 4 h, followed by cooling in water at  $(20 \pm 3)$  °C for at least 1 h**

Specimen No.	$l_1$	$b_1$	$F$	$f_v$	Wood failure
	(mm)	(mm)	(N)	(N/mm <sup>2</sup> )	(%)
1	25.42	25.18	543.1	0.85	80
2	24.85	25.01	450.3	0.73	90
3	25.14	25.10	1028.7	1.63	20
4	25.17	25.02	481.7	0.77	30
5	25.17	25.01	593.4	0.94	0
6	25.01	24.89	676.8	1.09	20
7	25.30	25.14	792.5	1.25	30
8	24.83	24.91	628.6	1.02	80
9	24.89	24.82	342.5	0.55	30
10	25.17	24.96	921.9	1.47	90
Average	25.10	25.00	646.0	1.03	45

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3. Immersion for  $(72 \pm 1)$  h in boiling water, followed by cooling in water at  $(20 \pm 3)$  °C for at least 1 h

Specimen No.	$h$	$b_1$	$F$	$f_v$	Wood failure
	(mm)	(mm)	(N)	(N/mm <sup>2</sup> )	(%)
1	25.02	25.07	1025.9	1.64	80
2	25.31	24.99	463.8	0.73	60
3	25.04	25.12	489.1	0.78	80
4	25.03	24.97	590.5	0.95	80
5	24.96	25.12	582.6	0.93	30
6	25.11	25.00	733.7	1.17	60
7	25.22	25.03	612.3	0.97	90
8	25.31	24.98	1108.7	1.75	90
9	25.06	25.11	1124.1	1.79	30
10	24.90	25.01	604.5	0.97	80
Average	25.10	25.04	733.5	1.17	70

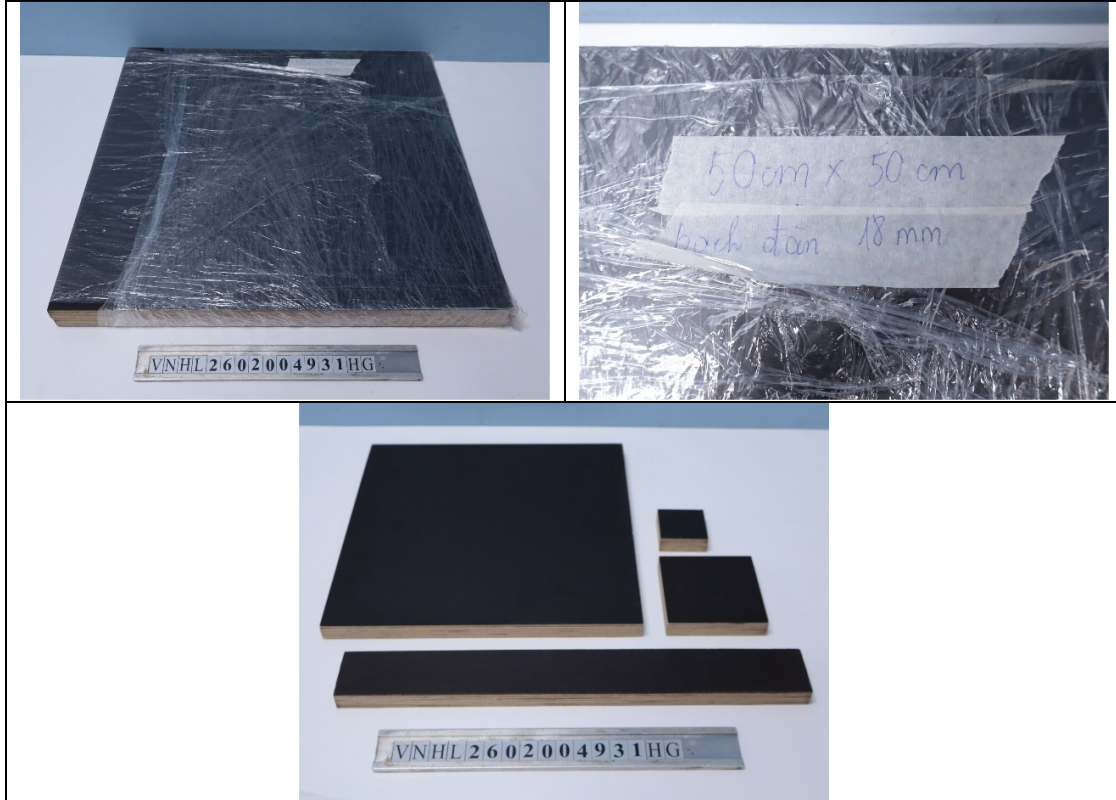
Note: Note:  $h$ : shear length;  $b_1$ : shear width;  $F$ : breaking force;  $f_v$ : shear strength.

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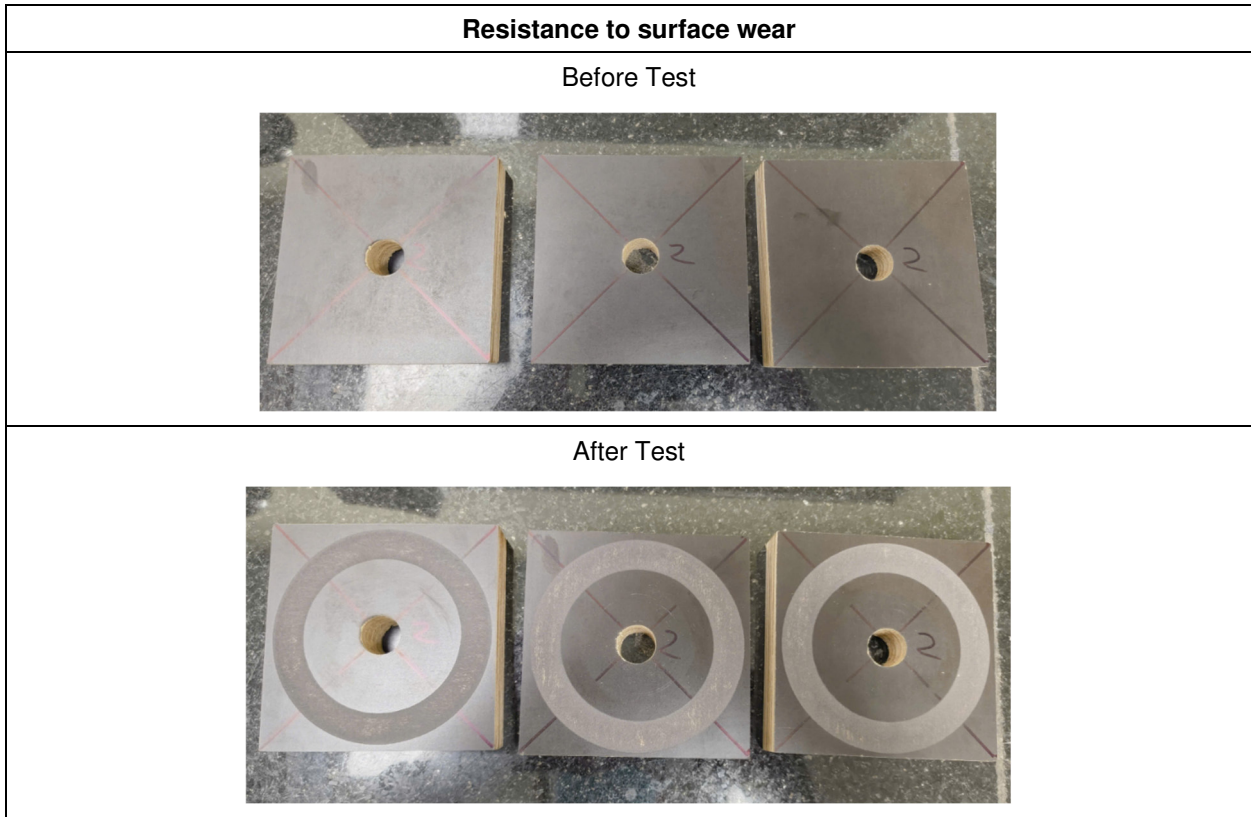
PHOTO OF SUBMITTED SAMPLE FOR TESTING



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REPORT RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY  
\*\*\* End of Report \*\*\*

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