



Test Report

Applicant	TIANJIN UNILION SUPPLY CHAIN CO., LIMITED
Test Category	Entrusted Test
Sample Type	Structural Laminated Veneer Lumber
Test Standard	AS/NZS 4357.0

TEST REPORT DUPLICATION

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Precautions

1. This test report is invalid without authorized approved signature, signature of verifier and approver.
2. This test report is invalid if being supplemented, deleted or altered.
3. Unless otherwise stated, the observations and test results in this report are relevant only to the sample(s) tested.
4. Objections to the test report must be submitted to Hongjun within 15 days of report received date. This report does not imply that the material, product, or service is or have ever been under Hongjun or ICTT certification program.
5. The test applicant is responsible for authenticity of sample information which not subject to verification of Hongjun.
6. The applicable decision rules of this test are: IEC Guide 115:2007 Procedure 2 - Accuracy method, do not subject to measurement uncertainty.

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1. Sample Description¹

Samples for entrusted test in this report were sampled and shipped to test laboratory by the applicant on Apr. 1st, 2024, packed well and kept in good conditions. Samples were identified as Structural laminated veneer lumber (LVL) by the applicant. The cross-sectional dimension of laminated veneer lumber is 90mm×45mm(23 plies). LVL samples are made of Larch with phenolic formaldehyde resin adhesive. The dimension specification and quantity of samples obtained are shown in the table below:

Sampling Information			
Test Item		Specimen Specification (Length×Width×Thickness, mm)	Specimen Quantity
Moisture Content		40×90×45	2
Bond Quality		150×65×45	5
Formaldehyde Emission Class		150×50×45	3
Bending Strength and Modulus of Elasticity	On edge ²	1800×90×45	2
	On flat ²	900×90×45	2

Notes:

1. Sample information is provided by the applicant.
2. “On edge” and “On flat” mean specimen placement orientation.

2. Referenced Standards

- ◆ AS/NZS 2098.1:2006 Methods of test for veneer and plywood-Method 1: Moisture content of veneer and plywood
- ◆ AS/NZS 2098.2:2012 Methods of test for veneer and plywood-Method 2: Bond quality of plywood (chisel test)
- ◆ AS/NZS 2754.1:2016 Adhesives for timber and timber products-Part 1: Adhesives for manufacture of plywood and laminated veneer lumber (LVL)
- ◆ AS/NZS 4063.1:2010 Characterization of structural timber-Part 1: Test methods
- ◆ AS/NZS 4357.0:2022 Structural laminated veneer lumber-Part 0: Specifications
- ◆ AS/NZS 4357.4:2005 Structural Laminated Veneer Lumber Part 4: Determination of Formaldehyde Emissions

Unless specified, all test standards in this report are the version cited by AS/NZS 4357.0.

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3. Test Description & Environment

Test procedure complied with corresponding test method requirement, which are listed in section 2 of this report.

The test started on April 3rd, 2024 and completed on April 9th, 2024. During the test, the relative humidity and temperature of test environment are $(65 \pm 10)\%$ and $(20 \pm 5)^{\circ}\text{C}$, respectively.

4. Test Results

Test Item			Units	Results
Moisture Content			%	11.0
Bond Quality	Steam Condition	Average	-	7.2
		Minimum	-	5.0
Formaldehyde Emission Class			mg/L	0.07

Test Item	Orientation	Mean Value	Moisture Content
		(MPa)	(%)
Modulus of Elasticity	On edge	15099	11.0
	On flat	13133	11.4
Bending Strength	On edge	91.7	11.0
	On flat	77.3	11.4

Reporter: Xiong Xin

Verifier: Tina. Deng





Approver:

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Appendix I – Typical Sample Photos


Bending Properties Test Specimen

Bond Quality Test Specimen

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