Inspection and testing report

1. Shear properties (X direction, unconnected parts)

Table 1 Test Information

Test methods,	ASTM C273/C273M-20
environmental	23ÿ, 50%RH
conditions, test	2026-03-11
date, test	Tie Jiancheng
personnel, test	CMT5205
instruments,	Extensometer (25mm)
strain	0.5 mm/min
measurement,	Zomes PU
test speed,	TU B/C
sample name, specifications, and test location.	Andri Lab 30

Table 2. Shear performance (X direction, unconnected area) test results

	length (mm)	width (mm)	thickness (mm)	Maximum load (N)	Shear strength (MPa)	shear modulus (MPa)	Destruction Mode
1	240	50.51	20.57	7839	0.6467	30.79	SGE
2	240	50.50	20.22	7764	0.6406	31.38	SGE
3	240	50.60	20.37	4663	0.3840	33.66	SGE
4	240	49.49	20.43	7595	0.6394	31.39	SGE
5	240	49.37	20.40	7247	0.6116	29.81	SGE
Mean,	----	----	----	----	0.584	31.4	----
standard	----	----	----	----	0.11	1.4	----
deviation, coefficient of variation %	----	----	----	----	19	4.5	----

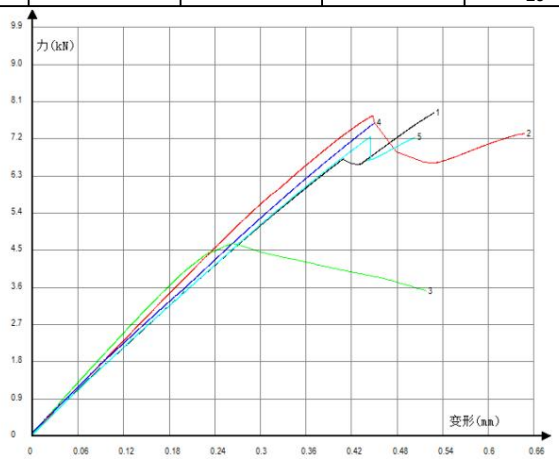

Figure 1. Shear performance (X direction, unconnected area) load-deformation curves

2. Shear properties (Y direction, unconnected parts)

Table 3 Test Information

Test methods,	ASTM C273/C273M-20
environmental	23ÿ, 50%RH
conditions, test	2026-03-11
date, test	Tie Jiancheng
personnel, test	CMT5205
instruments,	Extensometer (25mm)
strain	0.5 mm/min
measurement,	Zomes PU
test speed,	TU B/C
sample name, specifications, and test location.	Andri Lab 30

Table 4. Shear performance (Y direction, unconnected area) test results

	length (mm)	width (mm)	thickness (mm)	Maximum load (N)	Shear strength (MPa)	shear modulus (MPa)	Destruction Mode
1	240	51.09	20.27	5926	0.4833	32.814	SGE
2	240	50.78	20.23	8872	0.7280	31.917	SGE
3	240	50.00	20.67	8188	0.6823	32.890	SGE
4	240	50.19	20.38	7544	0.6263	30.245	SGE
5	240	50.79	20.29	8833	0.7246	32.132	SGE
Mean,	----	----	----	----	0.649	32.0	----
standard	----	----	----	----	0.10	1.1	----
deviation, coefficient of variation %	----	----	----	----	15	3.4	----

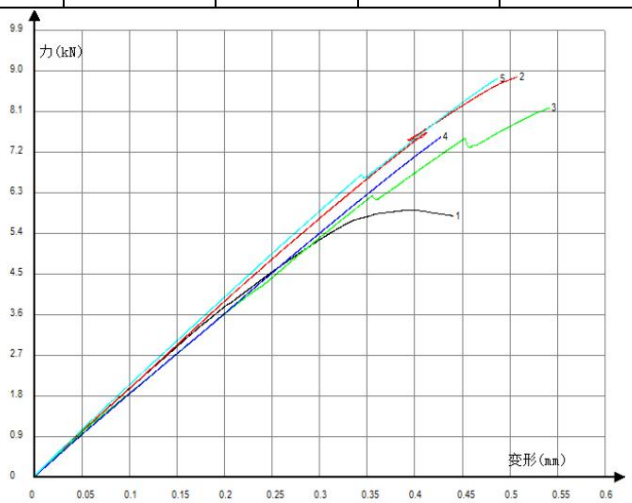

Figure 2. Shear performance (Y direction, unconnected area) load-deformation curves

3. Shear properties (connection points)

Table 5 Test Information

Test methods,	ASTM C273/C273M-20
environmental	23ÿ, 50%RH
conditions, test	2026-04-24
date, test	Tie Jiancheng
personnel, test	CMT5205
instruments,	Extensometer (25mm)
strain	0.5 mm/min
measurement,	Zomes PU
test speed,	TU B/C
sample name, specifications, and test location.	Andri Lab 30

Table 6 Shear performance (joint parts) test results

	length (mm)	width (mm)	thickness (mm)	Maximum load (N)	Shear strength (MPa)	shear modulus (MPa)	Destruction Mode
1	250	49.99	27.14	3519	0.2816	20.310	SGE
2	250	49.91	26.89	5174	0.4147	23.575	SGE
3	250	49.97	27.12	5238	0.4193	29.086	SGE
4	250	49.86	26.58	6469	0.5190	24.444	SGE
5	250	49.97	26.97	5163	0.4133	23.254	SGE
Mean,	----	----	----	----	0.410	24.1	----
standard	----	----	----	----	0.084	3.2	----
deviation, coefficient of variation %	----	----	----	----	20	13	----

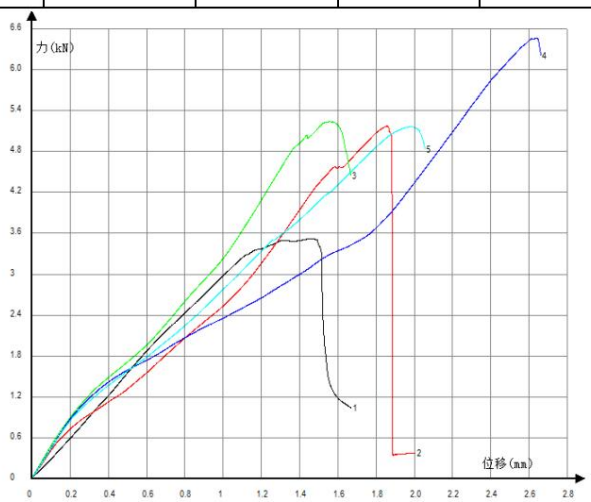

Figure 3 Shear performance (joint part) load-displacement curve

4. Compression performance (X direction, unconnected parts)

Table 7 Test Information

Test methods,	ASTM D1621-16 (2023)
environmental	23ÿ, 50%RH
conditions, test	2026-03-11
date, test	Tie Jiancheng
personnel, test	CMT5205
instruments,	LVDT
strain	5.0 mm/min
measurement,	Zomes PU
test speed,	TU B/C
sample name, specifications, and test location.	Andri Lab 30

Table 8. Test results of compression performance (X direction, unconnected parts)

	width (mm)	thickness (mm)	high (mm)	Maximum load (kN)	Compressive strength (MPa)	Compressive modulus (MPa)
1	49.89	49.93	50.04	6.645	2.668	69.29
2	50.04	50.04	49.96	6.217	2.483	67.38
3	49.96	49.96	49.88	6.267	2.511	63.52
4	50.02	49.86	50.01	6.534	2.620	76.80
5	49.87	50.13	49.89	6.558	2.623	77.19
Mean,	----	----	----	----	2.58	70.8
standard	----	----	----	----	0.080	6.0
deviation, coefficient of variation %	----	----	----	----	3.1	8.5

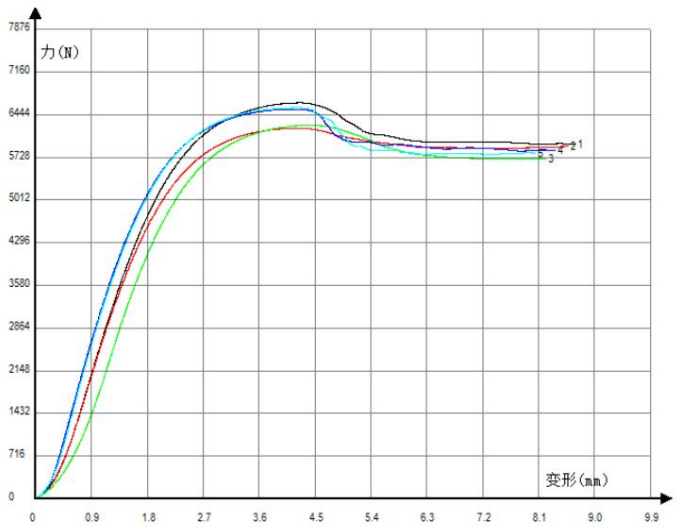

Figure 4. Compressive properties (X direction, unconnected parts) load-deformation curves

5. Compression performance (Y direction, unconnected parts)

Table 9 Test Information

Test methods,	ASTM D1621-16 (2023)
environmental	23ÿ, 50%RH
conditions, test	2026-03-11
date, test	Tie Jiancheng
personnel, test	CMT5205
instruments,	LVDT
test speed,	5.0 mm/min
sample name,	Zomes PU
specifications, and test location.	TU B/C

Table 10. Test results of compression performance (Y direction, unconnected parts)

	width (mm)	thickness (mm)	high (mm)	Maximum load (kN)	Compressive strength (MPa)	Compressive modulus (MPa)
1	50.12	49.87	49.96	6.406	2.563	75.46
2	50.07	50.13	50.24	6.174	2.460	69.22
3	50.07	49.96	49.11	6.099	2.438	68.49
4	49.89	49.88	50.12	6.156	2.474	74.12
5	49.98	50.07	49.97	6.045	2.416	73.52
Mean,	----	----	----	----	2.47	72.2
standard	----	----	----	----	0.056	3.1
deviation, coefficient of variation %	----	----	----	----	2.3	4.3

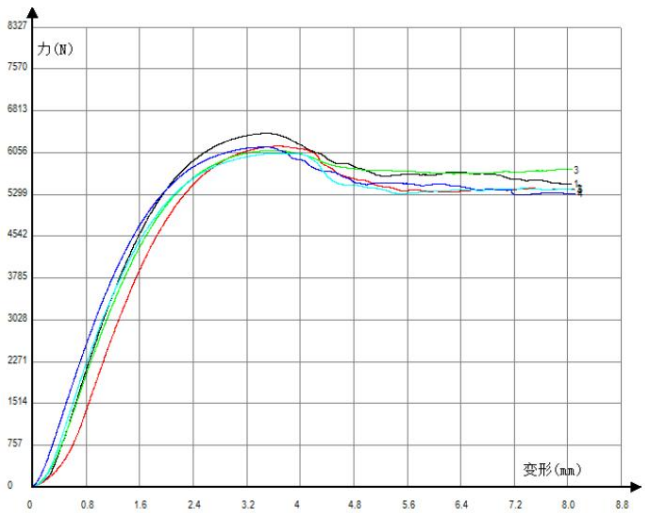

Figure 5. Compressive properties (Y direction, unconnected part) load-deformation curves

6. Compression performance (Z direction, unconnected parts)

Table 11 Test Information

Test methods,	ASTM D1621-16 (2023)
environmental	23ÿ, 50%RH
conditions, test	2026-03-11
date, test	Tie Jiancheng
personnel, test	CMT5205
instruments,	LVDT
strain	5.0 mm/min
measurement,	Zomes PU
test speed,	TU B/C
sample name, specifications, and test location.	Andri Lab 30

Table 12 Test results of compressibility (Z direction, unconnected parts)

	width (mm)	thickness (mm)	high (mm)	Maximum load (kN)	Compressive strength (MPa)	Compressive modulus (MPa)
1	50.07	49.96	50.07	6.427	2.569	78.60
2	49.96	49.98	50.11	6.636	2.658	78.15
3	49.87	50.12	49.82	6.777	2.711	83.77
4	50.13	49.93	49.97	6.545	2.615	72.54
5	49.98	49.89	50.02	6.363	2.552	82.45
Mean,	----	----	----	----	2.62	79.1
standard	----	----	----	----	0.065	4.4
deviation, coefficient of variation %	----	----	----	----	2.5	5.6

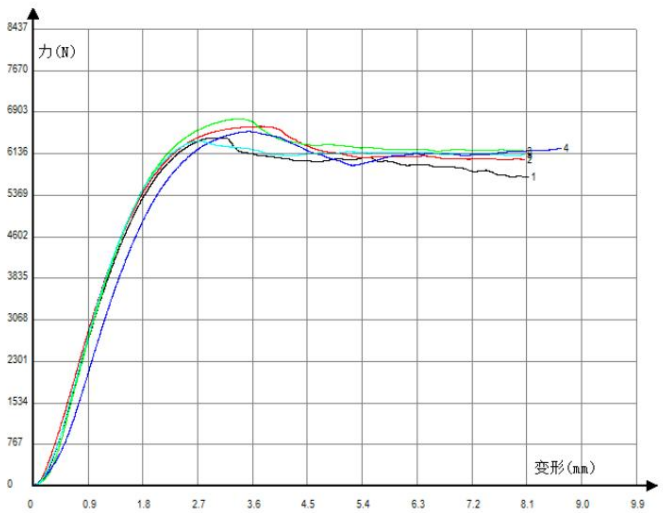

Figure 6. Compressive properties (Z direction, unconnected area) load-deformation curves

7. Tensile properties (connection parts)

Table 13 Test Information

Test methods,	ASTM D1623-17 (2023)
environmental	23ÿ, 50%RH
conditions, test	2026-04-24
date, test	Tie Jiancheng
personnel, test	CMT4204
instruments,	0.5 mm/min
test speed,	Zomes PU
sample name,	TU B/C
specifications, and test location.	Andri Lab 30

Table 14 Tensile property test results (connection parts)

	length (mm)	width (mm)	thickness (mm)	Maximum load (N)	Tensile strength (MPa)
1	165.24	52.38	52.24	783.3	0.2863
2	165.18	52.17	52.31	700.4	0.2566
3	164.32	52.14	52.47	689.9	0.2522
4	164.28	52.27	52.16	547.8	0.2009
5	165.15	52.31	52.21	968.1	0.3545
Mean,	----	----	----	----	0.270
standard	----	----	----	----	0.056
deviation, coefficient of variation %	----	----	----	----	

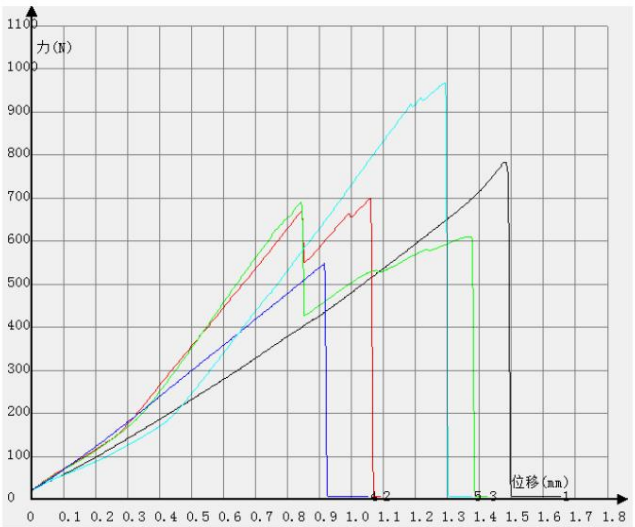

Figure 7 Tensile properties (connection area) load-displacement curves

8. Bending performance (X direction, unconnected parts)

Table 15 Test Information

Test methods,	ASTM D790-17
environmental	21ÿ, 52%RH
conditions, test	2026-03-19
date, test	Sun Shanshan
personnel, test	Microcomputer-controlled electronic universal testing machine, TSE503C
instruments,	2.0 mm/min
test speed,	Zomes PU
sample name,	TU B/C
specifications, and test location.	Huizhi Science and Technology Park Laboratory

Table 16 Bending performance (X direction, unconnected parts) test results

	thickness (mm)	width (mm)	span (mm)	Maximum load (N)	Bending strength (MPa)	Flexural modulus (MPa)
1	10.30	13.14	164.50	11.51	2.038	59.00
2	10.33	13.20	164.50	12.09	2.118	58.42
3	10.26	13.08	164.50	11.55	2.070	57.10
4	10.28	13.19	164.50	13.48	2.385	72.93
5	10.27	13.24	164.50	13.40	2.367	67.56
6	10.23	13.14	164.50	11.37	2.040	61.61
Mean, standard	----	----	----	----	2.17	62.8
deviation,	----	----	----	----	0.16	6.2
variation coefficient	----	----	----	----	7.5	9.9

number%

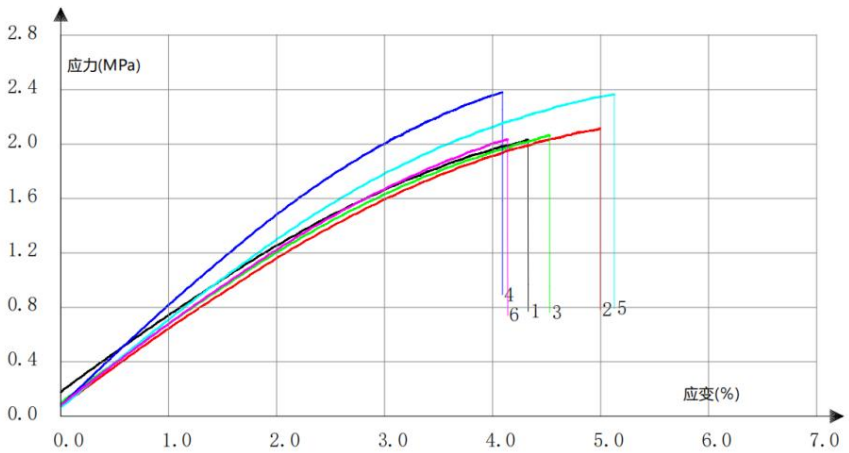

Figure 8. Bending performance (X direction, unconnected part) stress-strain curves

9. Bending performance (Y direction, unconnected parts)

Table 17 Test Information

Test methods,	ASTM D790-17
environmental	21ÿ, 52%RH
conditions, test	2026-03-19
date, test	Sun Shanshan
personnel, test	Microcomputer-controlled electronic universal testing machine, TSE503C
instruments,	2.0 mm/min
test speed,	Zomes PU
sample name,	TU B/C
specifications, and test location.	Huizhi Science and Technology Park Laboratory

Table 18 Test results of bending performance (Y direction, unconnected parts)

	thickness (mm)	width (mm)	span (mm)	Maximum load (N)	Bending strength (MPa)	Flexural modulus (MPa)
1	10.21	12.99	164.50	14.63	2.666	82.19
2	10.29	13.13	164.50	12.30	2.183	64.41
3	10.26	13.01	164.50	12.57	2.265	63.61
4	10.14	12.96	164.50	11.55	2.139	61.76
5	10.24	12.93	164.50	11.79	2.145	70.46
6	10.20	13.08	164.50	12.62	2.289	71.11
Mean, standard	----	----	----	----	2.28	68.9
deviation,	----	----	----	----	0.2	7.5
variation coefficient	----	----	----	----	8.7	11

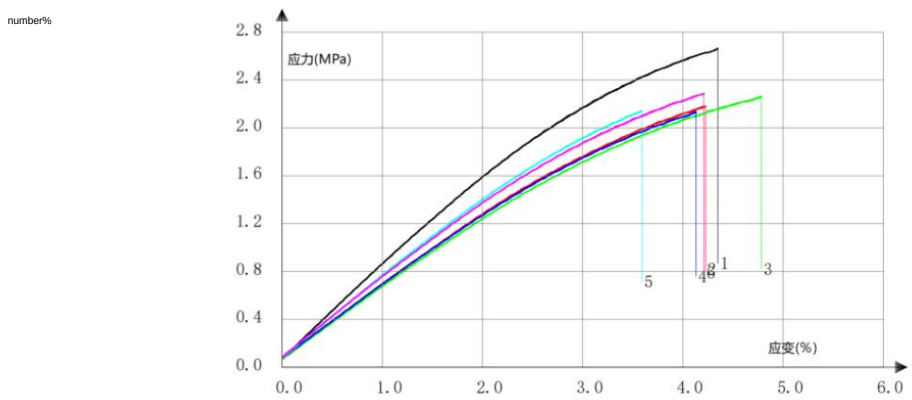

Figure 9. Bending performance (Y direction, unconnected part) stress-strain curves

National Testing & Inspection Holding Group Nanjing Guocai Testing Co., Ltd.

Inspection and testing report

10. Density

Serial Number	Testing items	Testing basis	Test results
1. Density	kg/m3	ASTM D1622-20	240
Note: Testing location: Laboratory No. 30, Andrei.			

----------End of Report----------