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中国认可  
国际互认  
检测  
TESTING  
CNAS L2249

REPORT No. 22-0896

# TEST REPORT

PRODUCT PLYWOOD

CLASSIFYING ENTRUSTED TESTING

国家林业和草原局人造板及其制品质量检验检测中心（南京）

南京林业大学木材及其制品测试中心

WOOD PRODUCTS QUALITY TEST& INSPECTION CENTER OF STATE  
FORESTRY AND GRASSLANG ADMINISTRATION(NAN JING)

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试用水印



WOOD PRODUCTS QUALITY TEST& INSPECTION CENTER OF STATE  
FORESTRY AND GRASSLAND ADMINISTRATION(NAN JING)

TESTING REPORT

No. 22-0896

3 PAGES No.1

Inspected unit			
Production unit			
Product name	PLYWOOD	Trademark	/
Product size	mm: 2440×1220×12	Testing classification	Entrusted testing
Grade	A	Standard	EN314-1, EN314-2, EN 310 EN322, EN323 ISO 12460-3
Production date	/	Sample size	mm: 500×500×12 4pcs
Bonding class	/	Wood species	Poplar core
Testing item	Moisture content, Density, Bonding quality, Modulus of elasticity in bending, Bending strength, Formaldehyde release		
Conclusion	<p>I , According to the standard EN322, EN323, EN314-1,EN314-2, EN 310 and ISO 12460-3, Wood Products Quality &amp; Inspection Center of State Forestry and Grassland Administration(Nanjing) tests its sending the plywood samples' Mechanical properties (Moisture content, Density, Bonding quality, Modulus of elasticity in bending, Bending strength) and Formaldehyde Release.</p> <p>Test values see in Page 2 and Page 3.</p> <div style="text-align: right;">  <p>Testing unit (stamp): Issuing date: November 29, 2022</p> </div>		
Remarks	<ol style="list-style-type: none"> <li>1. The production unit's name and trademark of the product are supplied by the inspected unit.</li> <li>2. This report is only responsible for sending samples.</li> <li>3. Bonding quality' details of pretreatments EN314-1 5.1.1: Immersion for 24 hours in water at (20±3)°C.</li> <li>4. Base on the outer veneers is too thin, the outer guleline (1,5) no tested.</li> </ol>		

Approved by: 梁高

Reviewed by: 梁星宇

Tested by: 魏娟

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WOOD PRODUCTS QUALITY TEST& INSPECTION CENTER OF STATE  
FORESTRY AND GRASSLANG ADMINISTRATION( NAN JING)

TESTING REPORT

No.22-0896

3 PAGES No.2

Inspected unit				
Product name	PLYWOOD	Sampling method	Sending	
Product size	mm: 2440×1220×12	Standard	EN314-1,EN314-2,EN310 EN322, EN 323 ISO 12460-3	
Testing date	November 18, 2022 TO November 29, 2022			
Testing item		Unit	Standard used	Tested value
Bonding quality (glueline 2)	Mean shear strength( $f_v$ )	N/mm <sup>2</sup>	EN 314-1 (pretreatments by EN314-1 5.1.1)	1.37
	The standard deviation	—		0.41
	Mean apparent cohesive wood failure (W)	%		22
Bonding quality (glueline 3)	Mean shear strength( $f_v$ )	N/mm <sup>2</sup>	EN 314-1 (pretreatments by EN314-1 5.1.1)	1.42
	The standard deviation	—		0.30
	Mean apparent cohesive wood failure (W)	%		32
Bonding quality (glueline 4)	Mean shear strength( $f_v$ )	N/mm <sup>2</sup>	EN 314-1 (pretreatments by EN314-1 5.1.1)	1.63
	The standard deviation	—		0.42
	Mean apparent cohesive wood failure (W)	%		35



WOOD PRODUCTS QUALITY TEST & INSPECTION CENTER OF STATE  
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TESTING REPORT

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3 PAGES No.3

Inspected unit					
Product name		PLYWOOD	Sampling method	Sending	
Product size		mm: 2440×1220×12	Standard	EN314-1, EN314-2, EN310	
Testing date		November 18, 2022 TO November 29, 2022		EN322, EN 323, ISO 12460-3	
Testing item		Unit	Standard used	Tested value	
Bending strength	Longitudinal grain	N/mm <sup>2</sup>	EN 310	Panel average	39.8
				Standard deviation	6.6
	Cross grain	N/mm <sup>2</sup>		Panel average	56.2
				Standard deviation	9.5
Moisture content		%	EN322	Average: 7.4	
Density		kg/m <sup>3</sup>	EN323	Average: 554	
Modulus of elasticity in bending	Longitudinal grain	N/mm <sup>2</sup>	EN 310	Panel average	4060
				Standard deviation	527.1
	Cross grain	N/mm <sup>2</sup>		Panel average	5300
				Standard deviation	753.2
Formaldehyde release		mg/m <sup>2</sup> h	ISO 12460-3	Average: 0.10	
Remarks	Moisture content (specimen dimension: 50mm×50mm×12mm; number: 6) Density (specimen dimension: 50mm×50mm×12mm; number: 6) Bending strength (specimen dimension: 290mm×50mm×12mm; number: 6 with Longitudinal grain fibers and 6 with Cross grain fibers) Bonding quality (specimen dimension: 100mm×25mm×12mm; 10 test pieces per glue line) Modulus of elasticity in bending (specimen dimension: 290mm×50mm×12mm; number: 6 with Longitudinal grain fibers and 6 with Cross grain fibers) Formaldehyde release (specimen dimension: 400mm×50mm×12mm; number: 2)				