

## PERRY JOHNSON LABORATORY ACCREDITATION, INC.

# Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Benchmark Holdings, LLC

2710 West 5th Avenue, Eugene, OR 97402

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

### ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

**Dimensional and Mechanical Testing** (As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen President

Perry Johnson Laboratory Accreditation, Inc. (PJLA) 755 W. Big Beaver, Suite 1325 Troy, Michigan 48084 

 Initial Accreditation Date:
 Issue Date:
 Expiration Date:

 June 20, 2024
 June 20, 2024
 October 03, 2024

 Accreditation No.:
 Certificate No.:

 127148
 L24-461

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: <u>www.pjlabs.com</u>



**Benchmark Holdings, LLC** 2710 West 5th Avenue, Eugene, OR 97402

2710 West 5th Avenue, Eugene, OR 97402 Contact Name: Mr. Chris Battin Phone: 541-484-9212

Accreditation is granted to the facility to perform the following testing:						
FLEX CODE	FIELD OF TEST	ITEMS, MATERIALS, OR PRODUCTS TESTED	COMPONENT, CHARACTERISTIC, PARAMETER TESTED	SPECIFICATION OR STANDARD METHOD	TECHNOLOGY OR TECHNIQUE USED	
F1, F2	Mechanical <sup>F</sup>	Wood Products / Adhesives	Shear strength Wood fiber failure	ASTM D905	Universal Test Machine - Compression	
F1, F2		Wood Products	Fastener withdrawal	ASTM D1761	Visual Evaluation Universal Test Machine -	
		/ Fasteners	strength		Tension	
F1, F2		Wood / Wood Products	Moisture	ASTM D2395 Section 7	Oven-Dry Moisture Content	
F1, F2			Density	ASTM D2395	Volume by Measurement Volume by Water Immersion Volume by Flotation Tube Forstner Bit Increment Core Chips Full-Size Members	
F1, F2			Specific Gravity	ASTM D2395	Volume by Measurement Volume by Water Immersion Volume by Flotation Tube Forstner Bit Increment Core Chips Full-Size Members	
F1, F2		Plywood / Wood-Based	Planar shear loaded by plates	ASTM D2718 Method A	Universal Test Machine - Compression	
F1, F2		Panel Products	Planar shear induced by five-point bending	ASTM D2718 Method B	Universal Test Machine - Compression	
F1, F2			Center point flexure test	ASTM D3043 Method A	Universal Test Machine - Compression	
F1, F2			Two-point flexure test	ASTM D3043 Method B	Universal Test Machine - Compression	
F1, F2			Large panel bending stiffness and strength	ASTM D3043 Method C	QL3 Machine - Midordinate Deflection	
F1, F2	Mechanical <sup>F</sup> Dimensional <sup>F</sup>	Wood / Wood Products	Flexure test for quality assurance	ASTM D3043 Method D	Universal Test Machine – Compression	
F1, F2			Moisture content	ASTM D4442	Oven-Dry Moisture Content	
F1, F2		Plywood / Wood-Based Panel Products	Treatment	ASTM D5516 Section 6.2	Fire retardant pressure treatment (witness basis only)	
F1, F2			Post-Treatment Drying	ASTM D5516 Section 6.3	Kiln drying (witness basis only)	
F1, F2			Flexure Test	ASTM D5516 Section 6.4, 6.5 and 7	Universal Test Machine - Compression	
F1, F2			Compressive Load	ASTM E72	Compressive Load Apparatus (witness basis only)	
F1, F2			Tensile Load		Tensile Load Apparatus (witness basis only)	

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CODE	FIELD OF TEST	MATERIALS, OR PRODUCTS TESTED	COMPONENT, CHARACTERISTIC, PARAMETER TESTED	SPECIFICATION OR STANDARD METHOD	USED
F1, F2	Mechanical F	Plywood /	Transverse Load -	ASTM E72	Transverse Load Apparatus -
	Dimensional F	Wood-Based	Specimen Horizontal		Horizontal (witness basis only)
F1, F2		Panel Products /	Transverse Load -		Transverse Load Apparatus -
		Other Panel	Specimen Vertical		Vertical (witness basis only)
F1, F2		Products	Concentrated Load		Concentrated Load Apparatus (witness basis only)
F1, F2			Impact Load		Impact Load Apparatus (witness basis only)
F1, F2			Racking Load (dry)		Racking Load Apparatus
F1, F2			Racking Load (wet)		Wetting room
					Racking Load Apparatus
F1, F2		Plywood /	Concentrated static load	ASTM E661	QL2 Machine
F1, F2		Wood-Based Panel Products	Concentrated impact load		QL2 Machine
F1, F2		Wood-Based	Moisture content	ASTM D1037	Oven-dry moisture content
F1, F2		Fiber and	Accelerated aging		Cyclic aging pre-treatment by
		Particle Panels			water immersion, steaming,
					freezing, and heating followed
					by post aging conditioning and
					mechanical testing
F1, F2			Dimensions/Size	ASTM D1037	Tape Measure
					Caliper
F1, F2			Specific Gravity		Micrometer Volume by Measurement
			-		
F1, F2			Surface Finish		Visual evaluation
F1, F2			Static Bending		Universal Test Machine -
E1 E2			Tanalan nanallal ta		Compression
F1, F2			Tension parallel to surface		Universal Test Machine - Tension
F1, F2	1		Tension perpendicular		Universal Test Machine -
11,12			to surface		Tension
F1, F2			Compression parallel to		Universal Test Machine -
,			surface		Compression (method C only)
F1, F2	1		Lateral nail resistance`		Universal Test Machine -
					Tension
F1, F2			Nail withdrawal		Universal Test Machine -
					Tension
F1, F2			Nail head pull through		Universal Test Machine -
					Tension
F1, F2			Direct screw		Universal Test Machine -
<b>F1 52</b>			withdrawal		Tension
F1, F2			Hardness		Universal Test Machine -
L					Compression

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F1, F2	Mechanical F	Wood-Based	Hardness modulus	ASTM D1037	Universal Test Machine -
	Dimensional F	Fiber and			Compression
F1, F2		Particle Panels	Shear in the plane of		Universal Test Machine -
			the panel		Compression
F1, F2			Glue line shear (block		Universal Test Machine -
			type)	-	Compression
F1, F2			Falling ball impact		Falling ball impact apparatus
F1, F2			Abrasion resistance by the U.S. Navy Wear Tester		N/A: Not in scope
F1, F2			Water		Determination of water
			Absorption/Thickness		absorption/ thickness swelling
			Swelling		using a micrometer or caliper
					after exposure to either:
					2-plus 22-hour submersion in water
					Single continuous 24-hour
					submersion in water
F1, F2			Linear Expansion with		Determination of linear
,			change in moisture		expansion using dial gage
			content		comparator after exposure from
					50% to 90% relative humidity
F1, F2			Interlaminar shear		Universal Test Machine -
					Compression loaded by plates
F1, F2			Edgewise shear		Universal Test Machine -
					Compression loaded by rails
F1, F2			Compression-shear		Universal Test Machine -
					Compression loaded by axial
F1, F2			Thickness - hardboard		loading Micromotor on coliner
-					Micrometer or caliper
F1, F2			Modulus of rupture - hardboard		Universal Test Machine - Compression
F1, F2	1		Tension parallel to	4	Universal Test Machine -
11,12			surface - hardboard		Tension
F1, F2			Tension perpendicular		Universal Test Machine -
,			to surface - hardboard		Tension
F1, F2			Water	1	Determination of water
			absorption/thickness		absorption/ thickness swelling
			swelling		using a micrometer or caliper
					after a single continuous 24-
					hour submersion in water
F1, F2			Moisture content -		Oven-dry moisture content
<b>F1 F2</b>			hardboard	4	X 1 1
F1, F2			Specific gravity - hardboard		Volume by measurement
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CODE	OF TEST	MATERIALS, OR PRODUCTS TESTED	CHARACTERISTIC, PARAMETER TESTED	STANDARD METHOD	USED	
F1, F2	Mechanical F	Plywood	Panel grade/appearance	United States	Visual evaluation	
F1, F2	Dimensional F		Panel dimensions	Department	Tape measure	
			(length, width, thickness)	of Commerce Product Standard PS-1	Micrometer	
				(Sections 5.7, 5.8.6,	Caliper	
F1, F2			Panel squareness	5.8.7, 5.9, 5.10, 5.11,	Tape measure	
F1, F2			Panel straightness	and 6.0)	Straight edge	
F1, F2			Bond performance -		Visual evaluation of wood fiber	
			vacuum/pressure test		failure after vacuum/pressure	
					pre-treatment followed by shear testing	
F1, F2			Bond performance -		Visual evaluation of wood fiber	
1 1, 1 2			boiling test		failure after boiling pre-	
					treatment followed by shear	
				~	testing	
F1, F2			Bond performance - heat		Visual evaluation of adhesive	
			performance test		bond performance after	
E1 E2			Mitta		exposure to open flame	
F1, F2			Moisture content		Oven-dry moisture content	
F1, F2			Scarf and finger joint		Universal test machine -	
F1, F2			strength		Tension Visual evaluation of scarf joint	
Г1, Г2			Scarf joint bond performance		wood fiber failure after	
			performance		vacuum/pressure and boiling	
					pre-treatments followed by	
					shear testing	
F1, F2			Finger joint bond		Visual evaluation of finger joint	
			performance		bond performance using a	
					wedge or chisel after vacuum/	
					pressure and boiling pre- treatments	
F1, F2			Concentrated static load		QL2 machine	
F1, F2			Concentrated impact		QL2 machine	
1 1, 1 2			load			
F1, F2			Uniform load		Uniform load machine	
F1, F2			Large panel bending		QL3 Machine - Midordinate	
Ĺ			stiffness and strength		Deflection	
F1, F2			Planar shear strength		Universal test machine -	
			loaded by plates		Compression loaded by plates	
F1, F2			Planar shear strength		Universal test machine -	
			loaded by five-point		Compression loaded by 5-point	
F1, F2			bending Shear through the		bend Universal test machine -	
11, 12			thickness strength		Compression by two rail shear	
F1, F2			Racking load (dry)		Racking load apparatus	
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Issue: 06/2024This supplement is in conjunction with certificate #L24-461Page 5 of 7						



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F1, F2	Mechanical F	Plywood /	Panel grade/appearance	United States	Visual evaluation	
F1, F2	Dimensional <sup>F</sup>	Wood-Based	Panel dimensions (length,	Department	Tape measure	
		Panel Products	width, thickness)	of Commerce Product Standard PS-2 (Sections	Micrometer	
E1 E2			D 1	5.3, 5.4, 6.0, and 7.0)	Caliper	
F1, F2			Panel squareness		Tape measure	
F1, F2			Panel straightness		Straight edge	
F1, F2	-		Concentrated static load		QL2 machine	
F1, F2			Concentrated impact load		QL2 machine	
F1, F2			Uniform load		Uniform load machine	
F1, F2			Racking load (dry)		Racking load apparatus	
F1, F2			Fastener-holding		Universal test machine -	
			resistance test - lateral		withdrawal by lateral tension	
F1, F2			load Fastener-holding		load Universal test machine -	
11,12			resistance test - Direct		withdrawal by direct tension	
			withdrawal load		load	
F1, F2			Large panel bending		QL3 Machine - Midordinate	
			stiffness and strength		Deflection	
F1, F2			Small static bending test for OSB		Universal test machine - Compression	
F1, F2	-		Small static bending test		Universal test machine -	
,			for composites and mat-	A. C.	Compression	
			formed panels			
F1, F2			Linear expansion from		Determination of linear	
			oven-dry to vacuum/pressure soak		expansion using dial gage comparator after pre-	
			vacuum pressure sour		conditioning at $103 \pm 2 \text{ deg C}$	
					followed by vacuum/pressure	
					treatment	
F1, F2			Linear expansion from 50% relative humidity to		Determination of linear expansion using dial gage	
			vacuum/pressure soak		comparator after pre-	
					conditioning at $103 \pm 2 \text{ deg C}$	
					followed by conditioning at 21	
					$\pm$ 6 deg C; 50 $\pm$ 5% relative	
F1, F2	1		Linear expansion and		humidity Determination of linear	
Г1, Г2			thickness swell after		expansion and thickness	
			exposure to relative		swelling after exposure from	
			humidity		50% to 90% relative humidity	
F1, F2			Moisture content		Oven-dry moisture content	
F1, F2			Panel thickness		Micrometer	
Issue: 06/2024 This supplement is in conjunction with certificate #L24-461 Page 6 of 7						



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F1, F2	Mechanical F	Plywood /	Probe test for	United States	Visual evaluation by probe
	Dimensional F	Wood-Based	delamination	Department	
F1, F2		Panel Products	Adhesive mold test -	of Commerce Product	Bond performance strength
			plywood	Standard PS-2 (Sections	retention after exposure to
				5.3, 5.4, 6.0, and 7.0)	mold (not applicable to panels
				-	made using phenolic resins)
F1, F2			Adhesive mold test -		Small static bending strength
			OSB, mat-formed panels,		retention after exposure to
			and composite panels		mold (not applicable to panels
E1 E2			Adhesive bacteria test -	-	made using phenolic resins)
F1, F2			plywood		Bond performance strength retention after exposure to
			prywood		bacteria (not applicable to
					panels made using phenolic
					resins)
F1, F2			Adhesive bacteria test -		Small static bending strength
			OSB, mat-formed panels,		retention after exposure to
			and composite panels		bacteria (not applicable to
					panels made using phenolic
					resins)
F1, F2			Moisture cycle test for		Vacuum/pressure pre-
			bond performance (single		treatment followed by oven
			cycle test)		drying (single cycle) and bond
<b>F1 F2</b>					performance testing
F1, F2			Moisture cycle test for	A	Vacuum/pressure pre-
			delamination and strength retention (six-cycle test)		treatment followed by oven drying (six cycle) and bond
			retention (six-cycle test)		performance or strength
					retention testing
F1, F2			Bond performance test for		QL2 machine
,			plywood with knots and		
			knotholes		
F1, F2			Radial probe test		Pre-treatment (either 72-hour
					water spray, 72-hour water
					soak, or vacuum/pressure
					treatment) followed by visual
					evaluation with probe
F1, F2			Deadweight bending		Static weight bending stiffness
			stiffness		apparatus
L	1 The second		:		Deflection measuring device

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location.

#### 2. Flex Code:

F1-Introduction of the testing of a new item, material, matrix, or product for an accredited test method F2-Introduction of a new version of an accredited standard method (with no modifications)