

LP Legacy[®] Premium Sub-Flooring
Louisiana-Pacific Corporation

PR-N127

Revised March 16, 2024

Product: LP Legacy[®] Premium Sub-Flooring
Louisiana-Pacific Corporation, 1610 West End Ave., Suite 200, Nashville, TN, 37203
(888) 820-0325
www.lpcorp.com

1. Basis of the product report:
 - 2021, 2018, and 2015 International Building Code (IBC): Sections 104.11 Alternative materials and 2303.1.5 Wood structural panels
 - 2012 IBC: Sections 104.11 Alternative materials and 2303.1.4 Wood structural panels
 - 2021, 2018, 2015, and 2012 International Residential Code (IRC): Sections R104.11 Alternative materials and R503.2 Wood structural panel sheathing
 - DOC PS 2-18, Performance Standard for Wood Structural Panels
 - ASTM D7033, Standard Practice for Establishing Design Capacities for Oriented Strand Board (OSB) Wood-Based Structural-Use Panels
 - APA Reports T2006P-17, T2008P-99, T2008P-100, T2008P-101, T2008P-102, T2017P-29, T2019P-19, T2019P-59A, T2019P-64, T2020P-24, T2021P-22, and T2021P-56, and other qualification data
2. Product description:

LP Legacy[®] Premium Sub-Flooring is made with strands of various species and strand classifications, meeting DOC PS 2 with a floor sheathing span rating and is in accordance with the in-plant manufacturing standard approved by APA. LP Legacy Premium Sub-Flooring is available in performance categories of 19/32, 5/8, 23/32, 7/8, and 1-1/8, and in 4x8-foot nominal panel size. The 23/32 sheathing also meets the PS 2 requirements for 48/24 Structural I Sheathing and 24oc Structural I Single Floor.
3. Design properties:

Table 1 lists the panel design capacities of LP Legacy Premium Sub-Flooring. Additional design information is available from the manufacturer (www.lpcorp.com). LP Legacy Premium Sub-Flooring shall be permitted for use as floor sheathing in accordance with an approved span rating identified in the panel trademark. Table 2 provides equivalent specific gravity values for LP Legacy Premium Sub-Flooring for connection design using smooth-shank or screw-shank nails with a diameter of ¼ inch or less.
4. Product installation:

LP Legacy Premium Sub-Flooring recognized in this report shall be used in accordance with the recommendations provided by the manufacturer (see link above) and APA Engineered Wood Construction Guide, Form E30 (www.apawood.org/resource-library).
5. Limitations:
 - a) LP Legacy Premium Sub-Flooring recognized in this report shall be designed in accordance with the applicable engineering practices using the design properties specified in this report and shall be permitted for use as floor sheathing in accordance with an approved span rating identified in the panel trademark.
 - b) LP Legacy Premium Sub-Flooring is limited to dry service conditions that result in the average equilibrium moisture content of sawn lumber of less than 16%.
 - c) LP Legacy Premium Sub-Flooring is produced at Louisiana-Pacific Corporation facilities in the following qualified performance categories: Carthage, Texas – 23/32, Hanceville, Alabama – 23/32, 7/8, and 1-1/8, and Roxboro, North Carolina – 23/32.

d) This report is subject to re-examination in one year.

6. Identification:

The LP Legacy Premium Sub-Flooring described in this report is identified by a label bearing the manufacturer's name (Louisiana-Pacific Corporation) and/or trademark, the APA assigned plant number (463 for the Carthage, TX plant, 442 for the Hanceville, AL plant, and 456 for the Roxboro, NC plant), the product performance category, the APA logo, the report number PR-N127, and a means of identifying the date of manufacture.

Table 1. Panel Design Capacities for LP Legacy Premium Sub-Flooring ^(a)

Span Rating	Performance Category ^(b)	Strength Axis ^(c)	Bending Stiffness, EI ^(d) (lbf-in. ² /ft)	Bending Strength, F _b S (lbf-in./ft)	Axial Stiffness, EA (lbf/ft)	Planar Shear, F _s (lb/Q) (lbf/ft)
20 o.c.	19/32	Primary	224,390	900	5,300,000	NA
		Secondary	92,680	500	3,300,000	NA
	5/8	Primary	229,270	1,000	5,400,000	NA
		Secondary	107,320	600	3,500,000	NA
24 o.c.	23/32 ^(e)	Primary	395,120	1,300	6,100,000	385
		Secondary	160,980	750	3,700,000	385
32 o.c.	7/8	Primary	715,000	1,800	8,100,000	NA
		Secondary	258,500	1,170	5,400,000	NA
48 o.c.	1-1/8	Primary	1,265,000	3,250	9,000,000	NA
		Secondary	544,500	2,050	5,900,000	NA

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 lbf = 0.454 kg, 1 psi = 6.9 kPa.

- ^(a) Design capacity is a single value that represents the product of the allowable stress and corresponding section property per 1-foot width of panel for a given load condition.
- ^(b) Performance Category is linked to the nominal panel thickness designations used in the International Building Code (IBC) and International Residential Code (IRC).
- ^(c) Primary strength axis corresponds to direction parallel to the panel strength axis, which is typically the panel length direction, and the secondary strength axis corresponds to the direction perpendicular to the panel strength axis, which is typically the panel width direction.
- ^(d) The tabulated value is apparent EI. The total panel deflection shall be calculated as follows:

For a single-span condition:
$$\Delta = \frac{w (L_3)^4}{921.6 EI}$$

For a two-span condition:
$$\Delta = \frac{w (L_3)^4}{2220 EI}$$

For a three-span condition:
$$\Delta = \frac{w (L_3)^4}{1743 EI}$$

where:

- Δ = total deflection (in.)
- w = uniform load (psf)
- EI = tabulated bending stiffness capacity (lbf-in.²/ft)
- L₃ = clear span + SW (in.)
- SW = support-width factor, equal to 0.25 in. for two-inch-nominal lumber framing and 0.625 in. for four-inch-nominal lumber framing

^(e) The 23/32 sheathing also meets the PS 2 requirements for 24 o.c. Structural I Rated Single Floor.

Table 2. Equivalent Specific Gravity (ESG) for Nailed Connections with LP Legacy Premium Sub-Flooring

Span Rating	Performance Category ^(a)	Withdrawal ^(b)	Lateral ^(b)
20 o.c.	19/32 or 5/8	0.40	0.50
24 o.c.	23/32	0.44	0.50
32 o.c.	7/8	0.40	0.50
48 o.c.	1-1/8	0.40	0.50

^(a) Performance Category is linked to the nominal panel thickness designations used in the IBC and IRC.

^(b) For smooth-shank or screw-shank nails with a diameter of 1/4 in. or less.

APA – *The Engineered Wood Association* is an approved national standards developer accredited by American National Standards Institute (ANSI). APA publishes ANSI standards and Voluntary Product Standards for wood structural panels and engineered wood products. APA is an accredited certification body under ISO/IEC 17065 by Standards Council of Canada (SCC), an accredited inspection agency under ISO/IEC 17020 by International Code Council (ICC) International Accreditation Service (IAS), and an accredited testing organization under ISO/IEC 17025 by IAS. APA is also an approved Product Certification Agency, Testing Laboratory, Quality Assurance Entity, Validation Entity, and Product Evaluation Entity by the State of Florida, and an approved testing laboratory by City of Los Angeles.

**APA – THE ENGINEERED WOOD ASSOCIATION
 HEADQUARTERS**

7011 So. 19th St. • Tacoma, Washington 98466
 Phone: (253) 565-6600 • Fax: (253) 565-7265 • Internet Address: www.apawood.org

PRODUCT SUPPORT HELP DESK
 (253) 620-7400 • E-mail Address: help@apawood.org

DISCLAIMER

APA Product Report® is a trademark of APA – *The Engineered Wood Association*, Tacoma, Washington. The information contained herein is based on the product evaluation in accordance with the references noted in this report. No warranties, express or implied, including as to fitness for a particular purpose, are made regarding this report. Neither APA nor its members shall be liable, or assume any legal liability or responsibility, for damages, direct or indirect, arising from the use, application of, and/or reference to opinions, findings, conclusions or recommendations included in this report. Consult your local jurisdiction or design professional to assure compliance with code, construction, and performance requirements. Because APA has no control over quality of workmanship or the conditions under which engineered wood products are used, it cannot accept responsibility for product performance or designs as actually constructed.