

ICC-ES Evaluation Report

ESR-4618

Reissued April 2025

This report also contains:


Revised September 2025

- [FL Supplement](#)

Subject to renewal April 2026

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<p>DIVISION: 06 00 00— WOOD, PLASTICS AND COMPOSITES</p> <p>Section: 06 17 13— Laminated Veneer Lumber</p>	<p>REPORT HOLDER: POLLMEIER FURNIERWERKSTOFFE GMBH</p> <p>ADDITIONAL LISTEE: PK-USA</p>	<p>EVALUATION SUBJECT: POLLMEIER SPRUCE LAMINATED VENEER LUMBER</p>	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, 2018 and 2015 [International Building Code® \(IBC\)](#)
- 2024, 2021, 2018 and 2015 [International Residential Code® \(IRC\)](#)

Properties evaluated:

- Structural
- Fire resistance

2.0 USES

The Pollmeier Spruce laminated veneer lumber (LVL) products described in this evaluation report, also known as PK-Lam, are used in engineered designs as alternatives to sawn lumber for beams, headers, joists and rafters. The LVL may be used in structures regulated under the IRC when an engineered design is submitted in accordance with Section R301.1.3 of the IRC.

3.0 DESCRIPTION

Pollmeier Spruce LVL is manufactured from spruce veneers laminated together using an exterior-type structural adhesives. The spruce veneer properties, adhesive, manufacturing parameters and finished product dimensions and tolerances are as specified in the manufacturer's quality documentation. The grain of all veneer is oriented parallel to the length of the billet. Pollmeier Spruce LVL members are available in thicknesses from 1½ to 7 inches (39 to 180 mm), depths from 3½ to 24 inches (89 to 610 mm), and lengths up to 59 feet (18 m). Each billet is 1½ or 1¾ inches (39 or 45 mm) thick. Multiple 1¾-inch-thick (45 mm) billets are laminated together to produce thicker LVL products. The 1¾-inch-thick (45 mm) LVL is produced in two grades, namely 1.7E and 2.1E. The 1½-inch-thick (39 mm) LVL is produced in a single grade of 1.7E.

4.0 DESIGN

4.1 General:

The design provisions for structural composite lumber in Chapter 8 of the ANSI/AWC National Design Specification for Wood Construction® (NDS) are applicable to Pollmeier Spruce LVL, unless otherwise noted in this report. Reference design values for dry conditions of use of 1¾-inch-thick (45 mm) Pollmeier Spruce

LVL are shown in [Table 1](#). Reference design values for dry conditions of use of 1½-inch-thick (39 mm) Pollmeier Spruce LVL are shown in [Table 3](#). The design values in Tables 1 and 3 have been determined in accordance with ASTM D5456, as required by IBC Section 2303.1.10. The reference design values must be adjusted in accordance with Section 8.3 of the NDS.

Connections of the Pollmeier Spruce LVL must be designed in accordance with the NDS using the equivalent specific gravities shown in [Table 5](#) for various fastener conditions. Bolt and nail spacing must be in accordance with the NDS.

4.2 Fire Resistance and Fire Blocking:

The fire-resistance of exposed Pollmeier Spruce LVL members may be calculated in accordance with Chapter 16 of the NDS.

The Pollmeier Spruce LVL described in the report may be used as fire blocking, provided the minimum thickness of the LVL is equal to or greater than what is specified for solid sawn lumber and wood structural panels in accordance with IBC Section 718.2.1 and IRC Section R602.8, as applicable.

5.0 CONDITIONS OF USE:

The Pollmeier Spruce LVL described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The Pollmeier Spruce LVL must be installed in accordance with this report and the approved plans. In the case of a conflict between the approved plans and this report, the more restrictive requirements govern.
- 5.2 Applied stresses for the Pollmeier Spruce LVL must not exceed the reference design values given in this report, adjusted by all applicable factors in accordance with the NDS.
- 5.3 Construction documents and calculations demonstrating that the design loads do not exceed the available strengths must be submitted to the code official. The calculations must be prepared by a registered design professional when required by statutes of the jurisdiction in which the project is to be constructed.
- 5.4 Use of the Pollmeier Spruce LVL is limited to dry, well-ventilated interior applications in which the in-service moisture content in lumber will not exceed 16 percent.
- 5.5 The Pollmeier Spruce LVL is manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Structural Wood-based Products \(AC47\)](#), dated June 2023 (editorially revised January 2025).

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4618) along with the name, registered trademark, or registered logo of the report holder and/or listee must be included in the product label.
- 7.2 In addition, the Pollmeier Spruce LVL (also known as PK-Lam) is identified by a product label bearing the LVL grade, the plant number and the lot number.
- 7.3 The report holder's contact information is the following:

POLLMEIER FURNIERWERKSTOFFE GMBH
PFERSDORFER WEG 6
99831 CREUZBURG
GERMANY
+49-369-26-945-0
www.pollmeier.com

- 7.4 The additional listee's contact information is the following:

PK-USA
14523 S PALO ALTO DRIVE
HERRIMAN, UTAH 84096
(702) 400-2195

TABLE 1—REFERENCE DESIGN PROPERTIES FOR 1³/₄-INCH POLLMEIER SPRUCE LVL

PROPERTY	DESIGN STRESS (psi) ⁽¹⁾			
	2.1E		1.7E	
	Edgewise Orientation (Beam)	Flatwise Orientation (Plank)	Edgewise Orientation (Beam)	Flatwise Orientation (Plank)
Bending Strength (F_b)	3,080 ⁽²⁾	3,675	2,250 ⁽²⁾	3,000
Apparent Modulus of Elasticity, MOE	2.0×10^6	2.0×10^6	1.6×10^6	1.8×10^6
True (Shear Free) Modulus of Elasticity, MOE	2.1×10^6	2.1×10^6	1.7×10^6	1.9×10^6
Tensile Stress (F_t)	2,285 ⁽³⁾		1,850 ⁽³⁾	
Compression Parallel to Grain (F_c)	3,080		2,800	
Compression Perpendicular to Grain ($F_{c\perp}$)	870	655	600	450
Longitudinal Shear (F_v)	320	175	250	175

For SI: 1 psi = 6.89 kPa, 1 inch = 25.4 mm

¹See Figure 1 for load orientation diagrams.

²Design value is for 12-inch depth. For depths ranging from 4 to 24 inches, edgewise bending strength must be adjusted by a volume factor, C_v , of $(12/d)^{0.21}$, where d is the member depth in inches. Volume factors for common LVL depths are shown in Table 2.

³Design value is for a 6-foot member length. For other lengths (minimum of 3 feet), adjust values by $(6/L)^{0.10}$, where L is the member length in feet. Volume factors for common LVL lengths are shown in Table 2.

⁴Reference design values must be adjusted in accordance with Section 8.3 of the NDS, as applicable.

TABLE 2—VOLUME FACTORS FOR 1³/₄-INCH POLLMEIER SPRUCE LVL

VOLUME FACTOR (C_v) FOR EDGEWISE BENDING ¹								
Beam Depth (inches)	4	5.5	9.25	12	14	16	20	24
Volume Factor	1.26	1.18	1.06	1.00	0.97	0.94	0.90	0.86
VOLUME FACTOR (C_v) FOR AXIAL TENSION ²								
Member Length (feet)	3	4.5	6	8	10	12	16	20
Volume Factor	1.07	1.03	1.00	0.97	0.95	0.93	0.91	0.89

For SI: 1 inch = 25.4 mm

¹For beam depths of at least 4 inches which are not tabulated, the volume factor is $(12/d)^{0.21}$, where d is the member depth in inches.

²For lengths of at least 3 feet which are not tabulated, the volume factor is $(6/L)^{0.10}$, where L is the member length in feet.

TABLE 3—REFERENCE DESIGN PROPERTIES FOR POLLMEIER 1¹/₂-INCH SPRUCE LVL

PROPERTY	DESIGN STRESS (psi) ⁽¹⁾	
	1.7E	
	Edgewise Orientation (Beam)	Flatwise Orientation (Plank)
Bending Strength (F_b)	2,380 ⁽²⁾	2,740
Apparent Modulus of Elasticity, MOE	1.6×10^6	1.5×10^6
True (Shear Free) Modulus of Elasticity, MOE	1.6×10^6	1.6×10^6
Tensile Stress (F_t)	1,475 ⁽³⁾	
Compression Parallel to Grain (F_c)	2,680	
Compression Perpendicular to Grain ($F_{c\perp}$)	710	625
Longitudinal Shear (F_v)	230	135

For SI: 1 psi = 6.89 kPa, 1 inch = 25.4 mm

¹See Figure 1 for load orientation diagrams.

²Design value is for 4-inch depth. For deeper LVL, adjust value by $(4/d)^{0.25}$, where ' d ' is the member depth in inches. Volume factors for common LVL depths are shown in Table 4.

³Design value is for a 6-foot member length. For other lengths (minimum of 3 feet), adjust value by $(6/L)^{0.125}$, where L is the member length in feet. Volume factors for common LVL lengths are shown in Table 4.

⁴Reference design values must be adjusted in accordance with Section 8.3 of the NDS, as applicable.

TABLE 4—VOLUME FACTORS FOR 1½-INCH POLLMEIER SPRUCE LVL

VOLUME FACTOR (C _v) FOR EDGEWISE BENDING ¹								
Beam Depth (inches)	3.5	4	5.5	9.25				
Volume Factor	1.00	1.00	0.92	0.81				
VOLUME FACTOR (C _v) FOR AXIAL TENSION ²								
Member Length (feet)	4	6	8	10	12	16	20	24
Volume Factor	1.05	1.00	0.96	0.94	0.92	0.88	0.86	0.84

For SI: 1 inch = 25.4 mm

¹For beam depths of at least 4 inches which are not tabulated, the volume factor is $(4/d)^{0.25}$, where d is the member depth in inches.

²For lengths of at least 3 feet which are not tabulated, the volume factor is $(6/L)^{0.125}$, where L is the member length in feet.

TABLE 5—EQUIVALENT SPECIFIC GRAVITIES FOR CONNECTION DESIGN

FASTENER TYPE	LOADING CONDITION	EQUIVALENT SPECIFIC GRAVITY			
		Face (Inserted perpendicular to the wide face)		Edge (Inserted perpendicular to narrow face)	
		2.1E	1.7E	2.1E	1.7E
Carbon steel nails (uncoated or galvanized)	Withdrawal	0.58	0.49	0.51	0.41
	Lateral	0.58	0.49	n/a	0.45
Bolts	Loaded parallel to grain	0.58	0.41	n/a	n/a
	Loaded perpendicular to grain	0.55	0.41	n/a	n/a

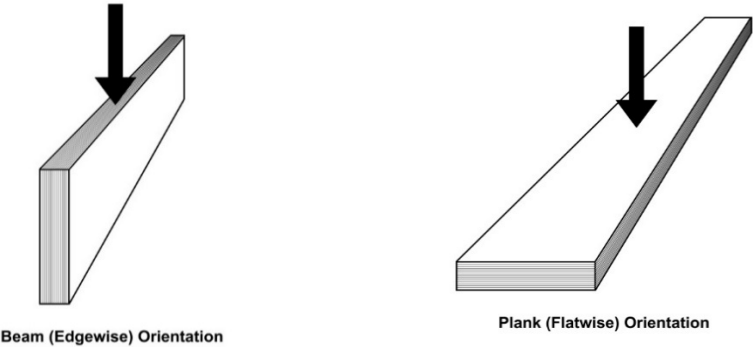


FIGURE 1—BENDING LOAD ORIENTATION

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DIVISION: 06 00 00— WOOD, PLASTICS AND COMPOSITES
Section: 06 17 13—Laminated Veneer Lumber

REPORT HOLDER:

POLLMEIER FURNIERWERKSTOFFE GMBH

EVALUATION SUBJECT:

POLLMEIER SPRUCE LAMINATED VENEER LUMBER

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Pollmeier Spruce laminated veneer lumber (LVL) products, described in ICC-ES evaluation report [ESR-4618](#), have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2023 *Florida Building Code—Building*
- 2023 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The Pollmeier Spruce laminated veneer lumber (LVL) products, described in Sections 2.0 through 7.0 of ICC-ES evaluation report [ESR-4618](#), comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation noted in ICC-ES evaluation report [ESR-4618](#) for the 2021 *International Building Code*® meets the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the Pollmeier Spruce laminated veneer lumber (LVL) for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* or the *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued April 2025 and revised September 2025.