PRODUCT REPORT®

OK Laminators Structural Glued Laminated Timber PR-L351(C)
OK Laminators Inc. DBA Mercer Mass Timber

Revised July 25, 2025

Products: OK Laminators Structural Glued Laminated Timber
OK Laminators, Inc. DBA Mercer Mass Timber, 1716 Wallis Road, Okanagan Falls, British Columbia, Canada V0H 1R2
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1. Basis of the product report:
   - 2020 National Building Code of Canada (NBC): Clause 1.2.1.1 of Division A and Clauses 4.1, 4.3.1, and 9.23 of Division B
   - CSA O86-19 Engineering Design in Wood
   - CSA O122-16 Structural Glued Laminated Timber recognized in CSA O86-19
   - CSA O177-06 (R2015) Qualification Code for Manufacturers of Structural Glued-Laminated Timber recognized in CSA O86-19
   - Qualification test data

2. Product description:
   OK Laminators glulam products are manufactured with Douglas Fir-Larch and Spruce-Lodgepole Pine-Jack Pine lumber in accordance with CSA O122. These layup combinations are recognized in CSA O86. OK Laminators glulam products are used as beams, headers, rafters, purlins, and columns, and are manufactured in nominal widths up to 760 mm (30 inches), depths up to 1,900 mm (75 inches), and lengths up to 29.9 m (98 feet).

3. Design properties:
   Limit states design properties for OK Laminators glulam products are listed in Table 1. The maximum design loads for OK Laminators glulam products shall be in accordance with the recommendations provided by the manufacturer or shall be determined based on the design properties listed in Table 1, as appropriate.

4. Product installation:
   OK Laminators glulam products shall be installed in accordance with the recommendations provided by the manufacturer and APA Construction Guide: *Glulam Connection Details*, Form T300 (www.apawood.org/resource-library). Permissible field notching and drilling of OK Laminators glulam beams shall be in accordance with the recommendations provided by the manufacturer and APA Technical Notes: *Field Notching and Drilling of Glued Laminated Timber Beams*, Form S560, and *Effect of Large Diameter Horizontal Holes on the Bending and Shear Properties of Structural Glued Laminated Timber*, Form V700 (see link above). Permissible field notching and drilling of OK Laminators columns shall be in accordance with the recommendations provided by the manufacturer.

5. Fire-rated assemblies:
   Fire-rated assemblies shall be constructed in accordance with the recommendations provided by the manufacturer. Procedures specified in Annex B of the 2019 CSA O86 may be considered in designing glulams exposed to fire up to 2 hours when permitted by the authority having jurisdiction. The fire-resistance rating shall be evaluated in accordance with Appendix D-2.11 of the 2020 NBC.

6. Limitations:
   a) OK Laminators glulam products shall be designed in accordance with the code using the engineering properties specified in this report.
   b) OK Laminators glulam products shall meet the dimensions specified in CSA O122 and CSA O86.
   c) OK Laminators glulam products shall be manufactured in accordance with layup combinations specified in CSA O122, *Structural Glued-Laminated Timber*.
   d) OK Laminators glulam products listed in this report are produced at OK Laminators' facilities in Okanagan Falls, British Columbia, Canada, under a quality assurance program audited by APA.
   e) This report is subject to re-examination in one year.

7. Identification:
   OK Laminators glulam products described in this report is identified by a label bearing the manufacturer's name (OK Laminators) and/or trademark, the APA assigned plant number (1155), the APA logo, the layup combination symbol, the report number PR-L351 or PR-L351C, and a means of identifying the date of manufacture.

Table 1. Specified Strengths and modulus of elasticity (MPa) and Relative Density for OK Laminators Glulam[1,2,3]

Stress grade	24f-E	24f-EX	18t-E	16c-E	20f-E	20f-EX	14t-E	12c-E	Wet-Use Factor
Species	Douglas Fir-Larch				Spruce-Lodgepole Pine-Jack Pine				
Bending moment (pos.), f_b[4]	30.6	30.6	24.3	14.0	25.6	25.6	24.3	9.8	0.80
Bending moment (neg.), f_b[4]	23.0	30.6	24.3	14.0	19.2	25.6	24.3	9.8	0.80
Longitudinal shear, f_v[5]	2.0	2.0	2.0	2.0	1.75	1.75	1.75	1.75	0.87
Compression parallel, f_c	30.2	30.2	30.2	30.2	25.2	25.2	25.2	25.2	0.75
Compression parallel combined with bending, f_{cb}	30.2	30.2	30.2	30.2	25.2	25.2	25.2	25.2	0.75
Compression perpendicular, f_{cp}[6]									
Compression face bearing	7.0	7.0	7.0	7.0	5.8	5.8	5.8	5.8	0.67
Tension face bearing	7.0	7.0	7.0	7.0	5.8	5.8	5.8	5.8	0.67
Tension net section, f_{tn}	20.4	20.4	23.0	20.4	17.0	17.0	17.9	17.0	0.75
Tension gross section, f_{tg}	15.3	15.3	17.9	15.3	12.7	12.7	13.4	12.7	0.75
Tension perpendicular to grain, f_{tp}	0.83	0.83	0.83	0.83	0.51	0.51	0.51	0.51	0.85
Modulus of elasticity, E	12,800	12,800	13,800	12,400	10,300	10,300	10,700	9,700	0.90
Mean oven-dry relative density (G)	0.49	0.49	0.49	0.49	0.42	0.42	0.42	0.42	-

(1) The tabulated design values for bending properties are intended for members stressed in bending due to loads applied perpendicular to the wide faces of the laminations. Members stressed in bending due to loads applied parallel to the wide faces of the laminations shall be designed in accordance with Clause 7.5.3 of CSA O86.
(2) Design of glulam members shall be in accordance with CSA O86, Engineering Design in Wood (Limit States Design).
(3) The tabulated design values are for standard-term load duration and dry conditions of use. For other load durations, see applicable design code. For wet conditions of use, multiply the tabulated values by the wet-use factors shown in the rightmost column of the table.
(4) In calculating the size factor for bending, K_{Zbg}, the beam width, b, must be taken as the full member width (mm).
(5) In calculating the factored fracture shear resistance at a notch on the tension side at a support, F_r, the effective lamination width, b_{eff}, must be taken as the beam width (mm).
(6) In calculating the size factor for bearing, K_{Zcp}, the beam width, b, must be taken as the full member width (mm).

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 ANSI National Accreditation Board (ANAB), and an accredited testing organization under ISO/IEC 17025 by ANAB. 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.

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