APA PRODUCT REPORT®

www.apawood.org

Mississippi Laminators Glulam Products — PR-L297
Mississippi Laminators, Inc. — Revised October 20, 2025

Products: Mississippi Laminators Glulam Products
Mississippi Laminators, Inc., 1151 County Road 210, P.O. Box 405, Shubuta, Mississippi, 39360
(601) 687-1571

1. Basis of the product report:
   - 2024 International Building Code (IBC): Sections 104.2.3 Alternative materials and 2303.1.3 Structural glued-laminated timber
   - 2021, 2018, and 2015 IBC: Sections 104.11 Alternative materials and 2303.1.3 Structural glued-laminated timber
   - 2024 International Residential Code (IRC): Sections R104.2.2 Alternative materials, and R502.1.3, R602.1.3, and R802.1.2 Structural glued-laminated timbers
   - 2021, 2018, and 2015 IRC: Sections R104.11 Alternative materials, and R502.1.3, R602.1.3, and R802.1.2 Structural glued-laminated timber
   - 2024, 2018, and 2015 ANSI/AWC NDS, National Design Specification for Wood Construction recognized in the 2024 IBC and IRC, 2021 and 2018 IBC and IRC, and 2015 IBC and IRC, respectively
   - ANSI 117-2020 and ANSI 117-2015 recognized in the 2024 and 2021 IBC and IRC, and 2018 IBC and IRC, respectively
   - ANSI A190.1-2022, ANSI A190.1-2017, and ANSI A190.1-2012 recognized in the 2024 IBC and IRC, 2021 and 2018 IBC and IRC, and 2015 IBC and IRC, respectively
   - ASTM D3737-18e1 and D3737-12 recognized in the 2024 and 2021 IBC and IRC, and 2018 and 2015 IBC and IRC, respectively
   - Qualification data

2. Product description:
   Mississippi Laminators glulam products are structural glued-laminated timber manufactured with Southern pine laminations in accordance with ANSI A190.1 using the layup combinations recognized in the National Design Specification (NDS) Supplement and or ANSI 117.

   The adhesives used to manufacture the glulam products are exterior-type adhesives meeting the requirements of ASTM D2559. Mississippi Laminators glulam products are used as beams, headers, rafters, or purlins, and are manufactured in nominal widths of 4, 6, and 8 inches, depths to 39 inches, and lengths up to 52 feet.

3. Design properties:
   Tables 1 and 2 list the allowable design properties for Mississippi Laminators glulam products. The allowable spans for Mississippi Laminators glulam products shall be in accordance with APA Data File: *Glued Laminated Beam Design Tables*, Form S475 (www.apawood.org/resource-library), or shall be determined based on the design properties listed in Tables 1 or 2, as appropriate.

4. Product installation:
   Mississippi Laminators glulam products shall be installed in accordance with the recommendations provided by the manufacturer and APA Construction Guide: *Glulam Connection Details*, Form T300 (see link above). Permissible field notching and drilling 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).

5. Fire-rated assemblies:
   Design of fire-resistant exposed wood members in accordance with Chapter 16 of the National Design Specification for Wood Construction (NDS), or Section 722.1 of the 2024, 2021, 2018, and 2015 IBC shall be applicable to Mississippi Laminators glulam products. Fire-rated assemblies shall be constructed in accordance with the recommendations provided by the manufacturer, and APA Design and Construction Guide: *Fire-Rated Systems*, Form W305 (see link above).

6. Limitations:
   a) Mississippi Laminators glulam products listed in this report shall be designed in accordance with the applicable code and the National Design Specification for Wood Construction using the allowable design properties specified in this report.
   b) Mississippi Laminators glulam products shall meet the dimensions specified in ANSI 117 and ANSI A190.1.
   c) Mississippi Laminators glulam products listed in this report are produced at the Shubuta, Mississippi facility under a quality assurance program audited by APA.
   d) This report is subject to re-examination in one year.

7. Identification:
   Mississippi Laminators glulam products described in this report are identified by a label bearing the manufacturer's name (Mississippi Laminators, Inc.) and/or trademark, the APA assigned plant number (1074), the product standard (ANSI A190.1), the APA logo, the layup combination symbol, the report number PR-L297, and a means of identifying the date of manufacture.

Table 1. Allowable Design Values for Glulam Products Manufactured by Mississippi Laminators, Inc. Stressed Primarily in Bending for Normal Duration of Load[1,2]

Symbol	Species Outer/ Core[3] (Bal or Unbal[4])	Bending About X-X Axis (Loaded Perpendicular to Wide Faces of Laminations)								Bending About Y-Y Axis (Loaded Parallel to Wide Faces of Laminations)						Axially Loaded		Fasteners	
		Extreme Fiber in Bending[5]		Compression Perpendicular to Grain		Shear Parallel to Grain[6]	Modulus of Elasticity[7]			Extreme Fiber in Bending[8]	Comp. Perpen-dicular to Grain	Shear Parallel to Grain[6]	Modulus of Elasticity[7]			Tension Parallel to Grain	Comp. Parallel to Grain	Specific Gravity for Dowel-Type Fastener Design	
		Bottom of Beam Stressed in Tension (Positive Bending)	Top of Beam Stressed in Tension (Negative Bending)	Ten. Face	Comp. Face		True	App-arent	Beam Stabi-lity				True	App-arent	Beam Stabi-lity			Top or Bottom Face	Side Face
		F_{bx}^{+} (psi)	F_{bx}^{-} (psi)	$F_{c\perp x}$ (psi)		F_{vx} (psi)	$E_{x\ true}$ (10^6 psi)	$E_{x\ app}$ (10^6 psi)	$E_{x\ min}$ (10^6 psi)	F_{by} (psi)	$F_{c\perp y}$ (psi)	F_{vy} (psi)	$E_{y\ true}$ (10^6 psi)	$E_{y\ app}$ (10^6 psi)	$E_{y\ min}$ (10^6 psi)	F_t (psi)	F_c (psi)	SG	
24F-V1	SP/SP (U)	2,400	1,750	740	650	300	1.8	1.7	0.90	1,450	650	260	1.6	1.5	0.79	1,100	1,500	0.55	0.55
24F-V3	SP/SP (U)	2,400	2,000	740	740	300	1.9	1.8	0.95	1,700	650	260	1.7	1.6	0.85	1,150	1,650	0.55	0.55
24F-V4[12]	SP/SP (U)	2,400	1,650	740	650	210	1.8	1.7	0.90	1,350	470	230	1.6	1.5	0.79	975	1,350	0.55	0.43
24F-V5	SP/SP (B)	2,400	2,400	740	740	300	1.8	1.7	0.90	1,700	650	260	1.7	1.6	0.85	1,150	1,600	0.55	0.55
24F-V5M1	SP/SP (B)	2,400	2,400	740	740	300	1.9	1.8	0.95	1,700	650	260	1.7	1.6	0.85	1,150	1,600	0.55	0.55
26F-V1	SP/SP (U)	2,600	2,000	740	740	300	1.9	1.8	0.95	1,700	650	260	1.7	1.6	0.85	1,150	1,600	0.55	0.55
26F-V3	SP/SP (U)	2,600	2,100	740	740	300	2.0	1.9	1.00	1,950	650	260	1.9	1.8	0.95	1,250	1,800	0.55	0.55
26F-V3M1[9]	SP/SP (U)	2,600	2,100	740	740	300	2.0	1.9	1.00	1,950	650	260	1.9	1.8	0.95	1,250	1,800	0.55	0.55
26F-V4	SP/SP (B)	2,600	2,600	740	740	300	2.0	1.9	1.00	1,700	650	260	1.9	1.8	0.95	1,200	1,600	0.55	0.55
26F-V4M1[9]	SP/SP (B)	2,600	2,600	740	740	300	2.0	1.9	1.00	1,700	650	260	1.9	1.8	0.95	1,200	1,600	0.55	0.55
28F-E1	SP/SP (U)	2,800	2,300	805	805	300	2.2[11]	2.1[11]	1.11[11]	1,600	650	260	1.8	1.7	0.90	1,300	1,850	0.55	0.55
28F-E2	SP/SP (B)	2,800	2,800	805	805	300	2.2[11]	2.1[11]	1.11[11]	2,000	650	260	1.8	1.7	0.90	1,300	1,850	0.55	0.55
30F-E1[10]	SP/SP (U)	3,000	2,400	805	805	300	2.2[11]	2.1[11]	1.11[11]	1,750	650	260	1.8	1.7	0.90	1,250	1,750	0.55	0.55
30F-E2[10]	SP/SP (B)	3,000	3,000	805	805	300	2.2[11]	2.1[11]	1.11[11]	1,750	650	260	1.8	1.7	0.90	1,350	1,750	0.55	0.55
Wet-use factor		0.8		0.53		0.875	0.833			0.8	0.53	0.875	0.833			0.8	0.73	see NDS	

(1) The combinations in this table are intended primarily for members stressed in bending due to loads applied perpendicular to the wide faces of the laminations. Allowable design values are tabulated, however, for loading both perpendicular and parallel to the wide faces of the laminations.

(2) The tabulated allowable design values are for normal duration of loading. For other durations of loading, see the applicable building code. The tabulated allowable design values are for dry conditions of use. For wet conditions of use, multiply the tabulated values by the wet-use factors shown at the bottom of the table.

(3) SP = Southern pine.

(4) The unbalanced (U) layup is intended primarily for simple-span applications and the balanced (B) layup is intended primarily for continuous or cantilevered applications.

(5) The values of F_{bx} are based on members 5-1/8 inches in width by 12 inches in depth by 21 feet in length. For members with a larger volume, F_{bx} shall be multiplied by a volume factor, $C_v = (5.125/b)^{1/20}\ (12/d)^{1/20}\ (21/L)^{1/20}$, where b is the beam width (in.), d is the beam depth (in.), and L is the beam length between the points of zero moment (ft).

(6) For non-prismatic members, members subject to impact or cyclic loading, or shear design of bending members at connections (2024 NDS 3.4.3.1 or 2018 and 2015 NDS 3.4.3.3), the F_{vx} and F_{vy} values shall be multiplied by a factor of 0.72. The tabulated F_{vy} values are for timbers with laminations made from a single piece of lumber across the width or multiple pieces that have been edge bonded. For timber manufactured from multiple piece laminations (across width) that are not edge bonded, value shall be multiplied by 0.4 for members with 5, 7, or 9 laminations or by 0.5 for all other members.

(7) The tabulated E values include true E (also known as "shear-free E"), apparent E, and E for beam stability calculation (NDS 3.3.3.8). For calculating beam deflections, the tabulated E_{app} values shall be used unless the shear deflection is determined in addition to bending deflection based on the tabulated E_{true}. The axial modulus of elasticity, E_{axial} and $E_{axial\ min}$, shall be equal to the tabulated $E_{y\ true}$ and $E_{y\ min}$ values.

(8) The values of F_{by} are based on members 12 inches in depth. For depths less than 12 inches, F_{by} shall be permitted to be increased by multiplying by the flat use factor, $(12/d)^{1/9}$, where d is the beam depth in inches. When d is less than 3 inches, use the size adjustment factor for 3 inches.

(9) When containing wane, this combination must be used in dry conditions only. In this case, wet-use factors must not be applied. Because of the wane, this combination is available only for an industrial appearance characteristic. If wane is omitted, these restrictions must not apply. This combination is limited to 9 to 20 laminations in depth, which contains a maximum of 1/6 wane on each side and must be 4 laminations or more in depth.

(10) This layup combination is limited to nominal 6 inches or less in width.

(11) For members of more than 15 laminations, $E_{x\ true} = 2.1 \times 10^6$ psi, $E_{x\ app} = 2.0 \times 10^6$ psi, and $E_{x\ min} = 1.06 \times 10^6$ psi.

(12) This combination may contain lumber with wane. If lumber with wane is used, the design value for shear parallel to grain, F_{vx}, shall be multiplied by 0.67 if wane is allowed on both sides. If wane is limited to one side, F_{vx} shall be multiplied by 0.83. This reduction shall be cumulative with the adjustment in footnote (6).

Table 2. Allowable Design Values for Glulam Products Manufactured by Mississippi Laminators, Inc. Stressed Primarily in Axial Tension or Compression for Normal Duration of Load[1]

Combination Symbol	Species[2]	Grade	All Loading				Axially Loaded			Bending about Y-Y Axis				Bending about X-X Axis		Fasteners
			Modulus of Elasticity[3]			Compression Perpendicular to Grain	Tension Parallel to Grain	Compression Parallel to Grain		Loaded Parallel to Wide Faces of Laminations				Loaded Perpendicular to Wide Faces of Laminations		Specific Gravity for Dowel-Type Fastener Design
										Bending			Shear Parallel to Grain[4,5]	Bending[6]	Shear Parallel to Grain[4]	
							2 or More Lams	4 or More Lams	2 or 3 Lams	4 or More Lams	3 Lams	2 Lams		2 Lams to 15 in. Deep[7]		
			$E_{x\,true}$, $E_{y\,true}$ or E_{axial} (10^6 psi)	$E_{x\,app}$ or $E_{y\,app}$ (10^6 psi)	$E_{x\,min}$, $E_{y\,min}$ or $E_{axial\,min}$ (10^6 psi)	$F_{c\perp}$ (psi)	F_t (psi)	F_c (psi)	F_c (psi)	F_{by} (psi)	F_{by} (psi)	F_{by} (psi)	F_{vy} (psi)	F_{bx} (psi)	F_{vx} (psi)	SG
49	SP	N1M16	1.8	1.7	0.90	650	1,350	2,100	1,450	1,950	1,750	1,500	260	1,800	300	0.55
50	SP	N1D14	2.0	1.9	1.00	740	1,550	2,300	1,700	2,300	2,100	1,750	260	2,100	300	0.55
Wet-use factors			0.833			0.53	0.8	0.73		0.8			0.875	0.8	0.875	see NDS

(1) The tabulated allowable design values are for normal duration of loading. For other durations of loading, see applicable building code. The tabulated allowable design values are for dry conditions of use. For wet conditions of use, multiply the tabulated values by the factors shown at the bottom of the table.

(2) SP = Southern pine.

(3) The tabulated E values include shear-free (true) modulus of elasticity ($E_{x\,true}$, $E_{y\,true}$, and E_{axial}), apparent modulus of elasticity ($E_{x\,app}$ and $E_{y\,app}$), and 5th percentile modulus of elasticity ($E_{x\,min}$, $E_{y\,min}$, and $E_{axial\,min}$). For column stability calculation (NDS 3.7.1), $E_{axial\,min}$ shall be used. For calculating the total deflection due to bending, the tabulated $E_{x\,app}$ or $E_{y\,app}$ values shall be used, or as an alternative, the true (shear-free) bending deflection shall be calculated using the tabulated $E_{x\,true}$ or $E_{y\,true}$, which shall be added to the calculated shear deflection to determine the total deflection due to bending.

(4) For non-prismatic members, notched members, members subject to impact or cyclic loading, or shear design of bending members at connections (2024 NDS 3.4.3.1 or 2018 and 2015 NDS 3.4.3.3), the tabulated F_{vx} and F_{vy} values shall be multiplied by 0.72.

(5) The tabulated F_{vy} values are for members of 4 or more lams. The tabulated F_{vy} values shall be multiplied by a factor of 0.95 for 3 lams and 0.84 for 2 lams. For members with 5, 7, or 9 lams manufactured from multiple-piece lams with unbonded edge joints, the tabulated F_{vy} values shall be multiplied by a factor of 0.4. For all other members manufactured from multiple-piece lams with unbonded edge joints, the tabulated F_{vy} values shall be multiplied by a factor of 0.5. This adjustment shall be cumulative with the adjustment specified in Footnote 5.

(6) The values of F_{bx} are based on members 5-1/8 inches in width by 12 inches in depth by 21 feet in length. For members with a larger volume, F_{bx} shall be multiplied by a volume factor, $C_v = (5.125/b)^{1/20}\,(12/d)^{1/20}\,(21/L)^{1/20}$, where b is the beam width (in.), d is the beam depth (in.), and L is the beam length between the points of zero moment (ft).

(7) The tabulated F_{bx} values are for members without special tension lams up to 15 inches in depth. If the member depth is greater than 15 inches without special tension lams, the tabulated F_{bx} values must be multiplied by a factor of 0.88. If special tension lams are used, the tabulated F_{bx} values are permitted to be increased by a factor of 1.18 regardless of the member depth provided that the increased F_{bx} value does not exceed 2,400 psi. This factor shall be cumulative with the volume factor, C_v, specified in Footnote 6.

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.

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