

Rosboro 24F-V5M1 Treated Glulam
Rosboro

PR-L275
Revised June 21, 2008

Products: Rosboro 24F-V5M1/SP Treated Glulam
Rosboro, P.O. Box 20, 2509 Main Street, Springfield, OR 97477
(541) 746-8411
www.rosboro.com

1. Basis of the product report:
 - 2006 International Building Code: Section 104.11 Alternative Materials
 - 2006 International Residential Code: Section R104.11 Alternative Materials
 - ASTM D 3737 recognized by the 2006 International Building Code and International Residential Code
 - ANSI/AITC A190.1 recognized by the 2006 IBC and IRC
 - APA Reports T2005P-60 and T2006P-37, and other qualification data
2. Product description:

Rosboro Treated Glulam are used as beams, headers, rafters, or purlins, and are manufactured with the EWS 24F-V5M1/SP balanced layup combination with enhancement for increased beam stiffness, as permitted by ANSI/AITC A190.1. The 24F-V5M1/SP glulam is treated with proprietary preservative systems, Hi-Clear II™ or K-8 (Copper-8-Quinolinolate) by Permapost Products Company in Hillsboro, Oregon (www.permapost.com), after manufacturing.
3. Design properties:

Table 1 lists the design properties for Rosboro Treated Glulam 24F-V5M1/SP. The allowable spans for Rosboro Treated Glulam 24F-V5M1/SP shall be in accordance with the recommendations provided by the manufacturer (www.rosboro.com/pdfs/TechGuide060326.pdf and www.rosboro.com/pdfs/TreatedGlulam070215.pdf), and with APA Data File: *Glued Laminated Beam Design Tables*, Form S475 (www.apawood.org/publications), as applicable. Based on studies conducted by APA, the Hi-Clear II™ or K-8 treatments do not have a negative effect on the bending strength and stiffness of 24F-V5M1/SP glulam beams when used in accordance with the limitations specified in Section 6 of this report.
4. Product installation:

Rosboro Treated Glulam 24F-V5M1/SP shall be installed in accordance with the recommendations provided by the manufacturer and APA Technical Notes: *Glulam Connection Details*, Form T300, and *Preservative Treatment of Glued Laminated Timber*, Form S580 (www.apawood.org/publications). Permissible filed notching and drilling shall be in accordance with the recommendations provided by the manufacturer, and with APA Technical Note: *Field Notching and Drilling of Glued Laminated Timber Beams*, Form S560 (www.apawood.org/publications).
5. Fire-rated assemblies:

Fire-rated assemblies shall be constructed in accordance with the recommendations provided by the manufacturer, and with APA Design/Construction Guide: *Fire-Rated Systems*, Form W305 (www.apawood.org/publications). For one- or two-hour rated glulam beams, Rosboro Treated Glulam 24F-V5M1/SP shall be constructed in accordance with ANSI/AITC A190.1 and designed in accordance with the recommendations provided by the manufacturer, and with APA Technical Note: *Calculating Fire Resistance of Glulam Beams and Columns*, Form Y245 (www.apawood.org/publications).

6. Limitations:
 - a) Rosboro Treated Glulam 24F-V5M1/SP shall be designed in accordance with the code using the design properties specified in this report.
 - b) Rosboro Treated Glulam 24F-V5M1/SP shall have a minimum depth of 9-1/2 inches.
 - c) Rosboro Treated Glulam 24F-V5M1/SP are not recommended for use in marine applications, such as docks and marinas, or applications in direct ground and standing water contact.
 - d) Rosboro Treated Glulam 24F-V5M1/SP is produced at Rosboro, Springfield, OR and Veneta, OR facilities under a quality assurance program audited by APA prior to treatment.
 - e) This report is subject to reexamination in 1 year.

7. Identification:

Rosboro Treated Glulam 24F-V5M1/SP described in this report are identified by a label bearing the manufacturer's name (Rosboro) and/or trademark, the APA assigned plant number (1001 for Springfield or 1078 for Veneta), the product standard (ANSI/AITC A190.1), the APA-EWS logo, the report number PR-L275, the treatment by Permapost, and a means of identifying the date of manufacture.

Table 1. Design Values for Rosboro Treated Glulam 24F-V5M1/SP for Normal Duration of Load ⁽¹⁾

Symbol	Species ⁽²⁾ Outer/Core	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 ⁽³⁾		Compression Perpendicular to Grain		Shear Parallel to Grain ⁽⁴⁾	Modulus of Elasticity ⁽⁵⁾	Extreme Fiber in Bending ⁽⁶⁾	Compr. Perpendicular to Grain	Shear Parallel to Grain ⁽⁴⁾	Modulus of Elasticity ⁽⁵⁾	Tension Parallel to Grain	Compr. Parallel to Grain	Modulus of Elasticity ⁽⁵⁾	Specific Gravity for Dowel-Type Fastener Design	
		Tension Zone Stressed in Tension	Compr. Zone Stressed in Tension	Tension Face	Compr. Face										Top or Bottom Face	Side Face
		F _{bx} ⁺ (psi)	F _{bx} ⁻ (psi)	F _{clx} (psi)	F _{vx} (psi)	E _x (10 ⁶ psi)	F _{by} (psi)	F _{cly} (psi)	F _{vy} (psi)	E _y (10 ⁶ psi)	F _t (psi)	F _c (psi)	E _{axial} (10 ⁶ psi)	SG		
Rosboro Treated Glulam 24F-V5M1/SP	SP/SP	2,400	2,400	740	740	300	1.8	1,750	650	265	1.5	1,150	1,650	1.6	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	0.833	see NDS	

Footnotes to Table 1:

1. The tabulated design values are for normal duration of loading. For other durations of loading, see the applicable building code. The tabulated 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.
2. SP = Southern pine.
3. 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, determined in accordance with applicable building code using 1/20 as the exponent. The beam depths are limited to 9-1/2 inches minimum.
4. For non-prismatic members, members subject to impact or cyclic loading, or shear design of bending members at connections, the F_{vx} and F_{vy} values shall be multiplied by a factor of 0.72.
5. The tabulated E_x and E_y values already include a 5% shear deflection (also known as "apparent E"). For beam stability and column stability calculations, E_{min} shall be determined by multiplying the tabulated E_x, E_y, or E_{axial} values by 0.528.
6. The values of F_{by} are based on members 12 inches in depth. For depths other than 12 inches, F_{by} shall be permitted to be increased by multiplying by the size factor, (12/d)^{1/8}, where d is the beam depth in inches. When d is less than 3 inches, use the size adjustment factor for 3 inches.

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