

**TABLE 2304.8(5)**  
**ALLOWABLE LOAD (PSF) FOR WOOD STRUCTURAL PANEL ROOF SHEATHING CONTINUOUS**  
**OVER TWO OR MORE SPANS AND STRENGTH AXIS PARALLEL TO SUPPORTS**  
**(Plywood structural panels are five-ply, five-layer unless otherwise noted)<sup>a</sup>**

PANEL GRADE	THICKNESS (inch)	MAXIMUM SPAN (inches)	LOAD AT MAXIMUM SPAN (psf)	
			Live	Total
Structural I sheathing	$\frac{7}{16}$	24	20	30
	$\frac{15}{32}$	24	35 <sup>b</sup>	45 <sup>b</sup>
	$\frac{1}{2}$	24	40 <sup>b</sup>	50 <sup>b</sup>
	$\frac{19}{32}$ , $\frac{5}{8}$	24	70	80
	$\frac{23}{32}$ , $\frac{3}{4}$	24	90	100
Sheathing, other grades covered in DOC PS 1 or DOC PS 2	$\frac{7}{16}$	16	40	50
	$\frac{15}{32}$	24	20	25
	$\frac{1}{2}$	24	25	30
	$\frac{19}{32}$	24	40 <sup>b</sup>	50 <sup>b</sup>
	$\frac{5}{8}$	24	45 <sup>b</sup>	55 <sup>b</sup>
	$\frac{23}{32}$ , $\frac{3}{4}$	24	60 <sup>b</sup>	65 <sup>b</sup>

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kN/m<sup>2</sup>.

- a. Uniform load deflection limitations  $\frac{1}{180}$  of span under live load plus dead load,  $\frac{1}{240}$  under live load only. Edges shall be blocked with lumber or other approved type of edge supports.
- b. For composite and four-ply plywood structural panel, load shall be reduced by 15 pounds per square foot.

**TABLE 2304.9.3.2**  
**FASTENING SCHEDULE FOR MECHANICALLY LAMINATED DECKING USING LAMINATIONS OF 2-INCH NOMINAL THICKNESS**

MINIMUM NAIL SIZE (Length x Diameter) (inches)	MAXIMUM SPACING BETWEEN FACE NAILS <sup>a, b</sup> (inches)		NUMBER OF TOENAILS INTO SUPPORTS <sup>c</sup>
	Decking Supports ≤ 48 inches o.c.	Decking Supports > 48 inches o.c.	
4 × 0.192	30	18	1
4 × 0.162	24	14	2
4 × 0.148	22	13	2
3 $\frac{1}{2}$ × 0.162	20	12	2
3 $\frac{1}{2}$ × 0.148	19	11	2
3 $\frac{1}{2}$ × 0.135	17	10	2
3 × 0.148	11	7	2
3 × 0.128	9	5	2
2 $\frac{3}{4}$ × 0.148	10	6	2
2 $\frac{3}{4}$ × 0.131	9	6	3
2 $\frac{3}{4}$ × 0.120	8	5	3

For SI: 1 inch = 25.4 mm

- a. Nails shall be driven perpendicular to the lamination face, alternating between top and bottom edges.
- b. Where nails penetrate through two laminations and into the third, they shall be staggered one-third of the spacing in adjacent laminations. Otherwise, nails shall be staggered one-half of the spacing in adjacent laminations.
- c. Where supports are 48 inches on center or less, alternate laminations shall be toenailed to alternate supports; where supports are spaced more than 48 inches on center, alternate laminations shall be toenailed to every support.

**2304.9.4.2 Nailing.** Each piece of decking shall be toenailed at each support with one 16d common nail through the tongue and face-nailed with one 16d common nail.

**2304.9.4.3 Controlled random pattern.** There shall be a minimum distance of 24 inches (610 mm) between end joints in adjacent courses. The pieces in the first and second courses shall bear on not fewer than two supports with end joints in these two courses occurring on alter-