

Method	Value (Imperial)	Value (Metric)	Note
Maximum Allowable Uniform Live Load-Joist Mount			
ICC-ES AC174	100 lbs/ft ²	4.79kPa or 4.79 kN/m ²	5/4 x 6 (2.98cm x 13.72cm) on 18 inch (45.72 cm) center (Elite Collection)
ASTM D7032	150 lbs/ft ²	7.18 kPa or 7.18 kN/m ²	5/4 x 6 (2.98cm x 13.72cm) on 16 inch (40.64 cm) center (Elite Collection)
ASTM D6109	200 lbs/ft ²	9.58 kPa or 9.58 kN/m ²	2 x 6 rectangle (3.56 cm x 13.72 cm) on 16 inch (40.64 cm) center
	100 lbs/ft ²	4.79 kPa or 4.79 kN/m ²	2 x 6 rectangle (3.56 cm x 13.72 cm) on 24 inch (60.96 cm) center
	200 lbs/ft ²	9.58 kPa or 9.58 kN/m ²	2 x 4 (3.81 cm x 8.89 cm) in 16 inch (40.64 cm) center
	60 lbs/ft ²	2.87 kPa or 2.87 kN/m ²	1 x 5 (2.54 cm x 12.70 cm) on 16 inch (40.64 cm) center (Essential Collection)
	60 lbs/ft ²	2.87 kPa or 2.87 kN/m ²	1 x 5.4 (2.54 cm x 13.72 cm) on 16 inch (40.64 cm) center (Vantage Collection)
Loads based on flexural stress of 250 lbs/in ² (1,723.7 kN/m ² , 1,723.7 kPa), modulus of elasticity of 100,000 lbs/in ² (689.5 MN/m ² , 689.5MPa)			
Maximum Allowable Uniform Live Load-Sleeper Mount			
ICC-ES AC174	150 lbs/ft ²	7.18 kPa or 7.18 kN/m ²	5/4 x 6 (2.98 cm x 13.72 cm) on 2 x 4 (3.81cm x 8.89 cm) sleeper, 18 inch (45.7 cm) on center
ASTM D7032	100 lbs/ft ²	4.79 kPa or 4.79 kN/m ²	5/4 x 6 (2.98 cm x 13.72 cm) on 2 x 4 (3.81cm x 8.89 cm) sleeper, 20 inch (50.8 cm) on center
ASTM D6109	100 lbs/ft ²	4.79 kPa or 4.79 kN/m ²	1 x 5 (2.54 cm x 12.70 cm) on 2 x 4 (3.81 cm x 8.89 cm) sleeper, 14 inch (35.6 cm) on center
	60 lbs/ft ²	2.87 kPa or 2.87 kN/m ²	1 x 5 (2.54 cm x 12.70 cm) on 2 x 4 (3.81 cm x 8.89 cm) sleeper, 18 inch (45.7 cm) on center
	150 lbs/ft ²	7.18 kPa or 7.18 kN/m ²	5/4 x 6 (2.98 cm x 13.72 cm) on 5/4 x 6 (2.98 cm x 13.72 cm) sleeper, 19.9 inch (50.5 cm) on center
	100 lbs/ft ²	4.79 kPa or 4.79 kN/m ²	5/4 x 6 (2.98 cm x 13.72 cm) on 5/4 x 6 (2.98 cm x 13.72 cm) sleeper, 21.9 inch (55.6 cm) on center
	100 lbs/ft ²	4.79 kPa or 4.79 kN/m ²	1 x 5 (2.54 cm x 12.70 cm) on 1 x 5 (2.54 cm x 12.70 cm) sleeper, 15.5 inch (39.4 cm) on center
	60 lbs/ft ²	2.87 kPa or 2.87 kN/m ²	1 x 5 (2.54 cm x 12.70 cm) on 1 x 5 (2.54 cm x 12.70 cm) sleeper, 19.5 inch (49.5 cm) on center
Flame Spread			
ASTM E84	100	Class "C" or Class III. Within the range of wood species commonly used for joists.	
Smoke Developed Index			
ASTM E84	350	Within the range expected for solid wood.	
Self Ignition			
ASTM D1929	741°F	394°C	
Flash Ignition			
ASTM D1929	729°F	387°C	
Coefficient of Friction			
ASTMD2394	0.59/0.64	-----	Static Dry Parallel/Perpendicular to grain
ASTMD2394	0.92/0.84	-----	Static Wet Parallel/Perpendicular to grain
Modulus of Elasticity			
ASTM D7032	100,000 lbs/in ²	689.5 Mpa or 689.5 MN/m ²	1. Value used to compute maximum allowable uniform live load for decking and railing applications. 2. Includes deductions for loss in stiffness due to temperature, UV exposure, and freeze-thaw cycles per ASTM D7032. 3. This value is given for informational purposes only and is NOT presented as a general design value.
ICC-ES AC174			
ASTM D7032	268,000 lbs/in ²	1,847.8 Mpa or 1,847.8 MN/m ²	Average value at ambient temperature. Not adjusted for temperature, freeze-thaw, UV exposure etc.
Modulus of Rupture			
ASTM D7032	2,500 lbs/in ²	17.2 Mpa or 17.2 MN/m ²	Average value at ambient temperature. Not adjusted for temperature, freeze-thaw, UV exposure etc.
Flexural Stress			
ASTM D7032	250 lbs/in ²	1.72 Mpa or 1.72 MN/m ²	1. Value used to compute maximum allowable uniform live load for decking and railing applications. 2. Includes deductions for loss in stiffness due to temperature, UV exposure, and freeze-thaw cycles per ASTM D7032. 3. This value is given for informational purposes only and is NOT presented as a general design value.
ICC-ES AC174			
Screw Withdrawl, 5/4 nominal thickness			
ASTM D7032	699.4 lbf	3.11 kN	Average value from all 5/4 profiles. #7 x 2¼ finish head through thickest part of board 120 lbs/in (210 N/cm) of thread penetration with safety factor of 5.
Screw Withdrawl, 2"nominal thickness, average			
ASTM D1037	819.7 lbf	3.65 kN	#7 x 2¼ finish head through thickest part of board 131 lbs/in (230 N/cm) of thread penetration with safety factor of 5.
Screw Pull-Through, 5/4 nominal thickness			
ASTM D1037	373.4 lbf	1.66 kN	Average value from all 5/4 profiles. #7 x 2¼ finish head through thickest part of board
Screw Pull-Through, 2" board nominal thickness			
ASTM D1037	612.8 lbf	2.73 kN	Average value from all 2" profiles. #7 x 2¼ finish head through thickest part of board
Screw Lateral Withdrawal, 5/4 nominal			
AC 174	474.7 lbf	2.11 kN	Average value from all 5/4 profiles. #7 x 2¼ finish head through thickest part of board
ASTM D7032			
ASTM D1761			
Screw Lateral Withdrawal, 2" nominal			
AC 174	441.0 lbf	1.96 kN	Average value from all 2" profiles. #7 x 2¼ finish head through thickest part of board
ASTM D7032/D1761			

Method	Value (Imperial)	Value (Metric)	Note
Nail Head Pull-Through, 16d Casing Nail			
ASTM D1037	199.0 lbf	0.885 kN	Through thinnest part of standard 5/4 x 6 profile.
Nail Head Pull-Through, 8d Box Nail			
ASTM D1037	650.7 lbf	2.89 kN	Through thinnest part of standard 5/4 x 6 profile.
Equivalent Specific Gravity			
NDS	0.50	- - - -	National Design Specification.
Heat Deflection Temperature @ 264 psi			
ASTM D648	157°F	69°C	
Vicat Softening Point			
ASTM D1525	242°F	116°C	
Compressive Strength			
ASTM D1621	2,828 lbs/in ²	19,498 kPa or 19,498 kN/m ²	Solid cube, 1.5" nominal, AERT composite, perpendicular to grain
Compressive Modulus			
ASTM D1621	61,209 lbs/in ²	422.0 Mpa or 422.0 MN/m ²	Solid cube, 1.5" nominal, AERT composite, perpendicular to grain
Thermal Conductivity			
ASTM C518-02	1.37 Btu-in/hr-ft ² ·°F	0.198 W/m ² ·K	Specimen emissivity 0.90
Janka Ball Hardness			
ASTM D143	1,352 lbf	6.01 kN	Face of 5/4 board. Force at 0.222".
Density of composite			
	57.7 lbs/ft ³	0.927 gr/cm ³	
Weight Per Linear Foot (5/4 x 6, Elite Collection, rectangular profile)			
	2.41 lbs/ft	3.59 kg/m	
Weight Per Linear Foot (2 x 6 rectangular profile)			
	3.14 lbs/ft	4.67 kg/m	
Weight Per Linear Foot (1 x 5, Essential Collection, rectangular profile)			
	2.07 lbs/ft	3.08 kg/m	
Weight Per Linear Foot (1 x 5.4, Vantage Collection, rectangular profile)			
	2.24 lbs/ft	3.33 kg/m	
Weight of Decking per Square Foot Installed Deck, 5/4 x 6, Elite Collection, rectangular profile			
	5.13 lbs/ft ²	25.1 kg/m ²	Boards spaced ¼ inch side to side
Weight of Decking per Square Foot Installed Deck, 2 x 6 rectangular profile			
	6.66 lbs/ft ²	32.5 kg/m ²	Boards spaced ¼ inch side to side
Weight of Decking per Square Foot Installed Deck, 1 x 5 Essential Collection, rectangular profile			
	4.74 lbs/ft ²	23.1 kg/m ²	Boards spaced ¼ inch side to side
Weight of Decking per Square Foot Installed Deck, 1 x 5.4, Vantage Collection, rectangular profile			
	4.76 lbs/ft ²	23.2 kg/m ²	Boards spaced ¼ inch side to side
Thermal Expansion, 5/4 x 6			
ASTM D1037	2.0 x 10 ⁻⁵ in/in/°F	3.6 x 10 ⁻⁵ cm/cm/°C	