

**STANDARD
GRADING RULES**
FOR SOUTHERN PINE LUMBER



2014



Table 1-a - STRUCTURAL LIGHT FRAMING, STRUCTURAL JOISTS AND PLANKS, AND STUDS - 2" TO 4" THICK (Each width has a separate set of design values)

GRADE	Extreme Fiber in Bending "F _b "	Tension Parallel to Grain "F _t "	Horizontal Shear "F _v "	Compression Perpendicular to Grain "F _{c⊥} "	Compression Parallel to Grain "F _{c∥} "	Modulus of Elasticity (million psi) "E"
Kiln Dried or S-Dry, MC 15, MC 19						
APPLES TO 2" - 4" THICK - 2" - 4" WIDE ONLY						
Dense Select Structural	2700	1900	175	660	2050	1.9
Select Structural	2350	1650	175	565	1900	1.8
Non Dense Select Structural	2050	1450	175	480	1800	1.6
No. 1 Dense	1650	1100	175	660	1750	1.8
No. 1	1500	1000	175	565	1650	1.6
No. 1 Non Dense	1300	875	175	480	1550	1.4
No. 2 Dense	1200	750	175	660	1500	1.6
No. 2	1100	675	175	565	1450	1.4
No. 2 Non Dense	1050	600	175	480	1450	1.3
No. 3 and Stud	650	400	175	565	850	1.3

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A7

APPLIES TO 2" - 4" THICK - 8" WIDE ONLY (1)

GRADE	Extreme Fiber in Bending to Grain $F_{t,b}$	Tension Parallel to Grain $F_{t,p}$	Horizontal Shear F_{sh}	Compression Perpendicular to Grain $F_{c,p}$	Compression Parallel to Grain $F_{c,p}$	Modulus of Elasticity (million psi) E
Dense Select Structural	2200	1550	175	660	1850	1.9
Select Structural	1950	1350	175	565	1700	1.8
Non Dense Select Structural	1700	1200	175	480	1650	1.6
No. 1 Dense	1350	900	175	660	1600	1.8
No. 1 Non Dense	1100	700	175	480	1400	1.4
No. 2 Dense	975	600	175	660	1400	1.6
No. 2 Non Dense	875	500	175	565	1300	1.4
No. 3 and Stud	525	325	175	565	775	1.3

Kiln Dried or S-Dry, MC 15, MC 19

GRADE	Extreme Fiber in Bending to Grain $F_{t,b}$	Tension Parallel to Grain $F_{t,p}$	Horizontal Shear F_{sh}	Compression Perpendicular to Grain $F_{c,p}$	Compression Parallel to Grain $F_{c,p}$	Modulus of Elasticity (million psi) E
Dense Select Structural	2400	1650	175	660	1900	1.9
Select Structural	2100	1450	175	565	1800	1.8
Non Dense Select Structural	1850	1300	175	480	1700	1.6
No. 1 Dense	1500	1000	175	660	1650	1.8
No. 1 Non Dense	1200	775	175	480	1450	1.4
No. 2 Dense	1050	650	175	660	1450	1.6
No. 2 Non Dense	950	525	175	565	1400	1.4
No. 3 and Stud	575	350	175	565	800	1.3

Table 1-c - STRUCTURAL LIGHT FRAMING, STRUCTURAL JOISTS AND PLANKS, AND STUDS - 2" TO 4" THICK (Each width has a separate set of design values)

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A6

APPLIES TO 2" - 4" THICK - 5" - 6" WIDE ONLY

GRADE	Extreme Fiber in Bending to Grain $F_{t,b}$	Tension Parallel to Grain $F_{t,p}$	Horizontal Shear F_{sh}	Compression Perpendicular to Grain $F_{c,p}$	Compression Parallel to Grain $F_{c,p}$	Modulus of Elasticity (million psi) E
Dense Select Structural	2400	1650	175	660	1900	1.9
Select Structural	2100	1450	175	565	1800	1.8
Non Dense Select Structural	1850	1300	175	480	1700	1.6
No. 1 Dense	1500	1000	175	660	1650	1.8
No. 1 Non Dense	1200	775	175	480	1450	1.4
No. 2 Dense	1050	650	175	660	1450	1.6
No. 2 Non Dense	950	525	175	565	1400	1.4
No. 3 and Stud	575	350	175	565	800	1.3

Table 1-b - STRUCTURAL LIGHT FRAMING, STRUCTURAL JOISTS AND PLANKS, AND STUDS - 2" TO 4" THICK (Each width has a separate set of design values)

Table 1-e - STRUCTURAL LIGHT FRAMING, STRUCTURAL JOISTS AND PLANKS, AND STUDS - 2" TO 4" THICK (Each width has a separate set of design values)

GRADE

Kiln Dried or S-Dry, MC 15, MC 19

APPLIES TO 2" - 4" THICK - 12" WIDE ONLY (1), (2)

Grade	Extreme Fiber in Bending to Grain F_b	Tension Parallel to Grain F_t	Horizontal Shear F_v	Compression Perpendicular to Grain F_c	Compression Parallel to Grain F_{cp}	Modulus of Elasticity (million psi) E
Dense Select Structural	1800	1250	175	660	1750	1.9
Select Structural	1600	1100	175	565	1650	1.8
Non Dense Select Structural	1400	975	175	480	1550	1.6
No. 1 Dense	1100	750	175	660	1500	1.8
No. 1 Non Dense	1000	650	175	565	1400	1.6
No. 2 Dense	800	500	175	660	1300	1.4
No. 2 Non Dense	700	450	175	565	1250	1.3
No. 3 and Stud	450	250	175	565	725	1.3

Table 1-d - STRUCTURAL LIGHT FRAMING, STRUCTURAL JOISTS AND PLANKS, AND STUDS - 2" TO 4" THICK (Each width has a separate set of design values)

GRADE

Kiln Dried or S-Dry, MC 15, MC 19

APPLIES TO 2" - 4" THICK - 10" WIDE ONLY (1)

Grade	Extreme Fiber in Bending to Grain F_b	Tension Parallel to Grain F_t	Horizontal Shear F_v	Compression Perpendicular to Grain F_c	Compression Parallel to Grain F_{cp}	Modulus of Elasticity (million psi) E
Dense Select Structural	1950	1300	175	660	1800	1.9
Select Structural	1700	1150	175	565	1650	1.8
Non Dense Select Structural	1500	1050	175	480	1600	1.6
No. 1 Dense	1200	800	175	660	1550	1.8
No. 1 Non Dense	1050	700	175	565	1450	1.6
No. 2 Dense	850	525	175	660	1350	1.4
No. 2 Non Dense	750	425	175	565	1250	1.3
No. 3 and Stud	475	275	175	565	750	1.3