Cypress Design Values

DESIGN VALUES MAKE SPECIFYING CYPRESS EASIER

The American Lumber Standards Committee (ALSC) has certified the first-ever set of engineering design values for cypress. The design values now are recognized in model building codes across the United States.

The certification makes it much easier for architects and builders to specify cypress for structural applications, such as exposed beams, timbers, posts, columns, headers and other large structural or accent pieces.

Grading for structural cypress will be under the auspices of the Southern Pine Inspection Bureau (SPIB) (www.spib.org). Appearance-grade cypress will continue to be governed by the rules of the National Hardwood Lumber Association (NHLA) (www.natlhardwood.org).

Summary of Allowable Base Design Values for Baldcypress Dimension Lumber

Grade	Extreme Fiber in Bending F_b	Tension Parallel-to-Grain F_t	Compression Parallel-to-Grain F_c	Horizontal Shear F_v	Compression Perpendicular-to-Grain	Modulus of Elasticity, E
Select Structural	1200	650	1200	160	615	1,400,000
No. 1	1000	550	1050	160	615	1,400,000
No. 2	825	450	900	160	615	1,300,000
No. 3	475	250	525	160	615	1,200,000
Construction	925	500	1100	160	615	1,200,000
Standard	525	275	925	160	615	1,100,000
Utility	250	125	600	160	615	1,000,000
Stud	650	350	575	160	615	1,200,000

Design Values in Pounds Per Square Inch (psi)

Summary of Allowable Design Values for Cypress Timbers

Grade	Extreme Fiber in Bending F_b	Tension Parallel-to-Grain F_t	Compression Parallel-to-Grain F_c	Horizontal Shear F_v	Compression Perpendicular-to-Grain	Modulus of Elasticity, E
Select Structural	1150	750	1050	200	615	1,300,000
No. 1	1000	675	925	200	615	1,300,000
No. 2	625	425	600	175	615	1,000,000

Design Values in Pounds Per Square Inch (psi)

Comparisons Between Base Design Values for Baldcypress, Northern White Cedar, Western Cedars & Redwood Dimension Lumber

Species & Commercial Grade	Size Classification	Bending F_b	Tension Parallel-to-Grain F_t	Compression Perpendicular-to-Grain	Compression Parallel-to-Grain F_c	Modulus of Elasticity, E	Grading Rules Agency
Baldcypress							
Select Structural	2" - 4" thick	1200	650	615	1200	1,400,000	SPIB
No. 1	2" and wider	1000	550	615	1050	1,400,000	
No. 2		825	450	615	900	1,300,000	
No. 3		475	250	615	525	1,200,000	
Stud		650	350	615	575	1,200,000	
Construction	2" - 4" thick	925	500	615	1100	1,200,000	
Standard	2" - 4" wide	525	275	615	925	1,100,000	

Utility		250	125	615	600	1,000,000	
Northern White Cedar							
Select Structural	2" - 4" thick	775	450	370	750	800,000	NeLMA
No. 1	2" and wider	575	325	370	600	700,000	
No. 2		550	325	370	475	700,000	
No. 3		325	175	370	275	600,000	
Stud		425	250	370	300	600,000	
Construction	2" - 4" thick	625	375	370	625	700,000	
Standard	2" - 4" wide	350	200	370	475	600,000	
Utility		175	100	370	325	600,000	
Western Cedars							
Select Structural	2" - 4" thick	1000	600	425	1000	1,100,000	WCLIB
No. 1	2" and wider	725	425	425	825	1,000,000	WWPA
No. 2		700	425	425	650	1,000,000	
No. 3		400	250	425	375	900,000	
Stud		550	325	425	400	900,000	
Construction	2" - 4" thick	800	475	425	850	900,000	
Standard	2" - 4" wide	450	275	425	650	800,000	
Utility		225	125	425	425	800,000	
Redwood							
Clear Heart Structural	2" - 4" thick	1750	1000	650	1850	1,400,000	RIS
Select Structural	2" and wider	1350	800	650	1500	1,400,000	
Select Structural, open grain		1100	625	425	1100	1,100,000	
No. 1		975	575	650	1200	1,300,000	
No. 1, open grain		775	450	425	900	1,100,000	
No. 2		925	525	650	950	1,200,000	
No. 2, open grain		725	425	425	700	1,000,000	
No. 3		525	300	650	550	1,100,000	
No. 3, open grain		425	250	425	400	900,000	
Stud		575	325	425	450	900,000	
Construction	2" - 4" thick	875	475	425	925	900,000	
Standard	2" - 4" wide	450	275	425	725	900,000	
Utility		225	125	425	475	800,000	
		Design Values in Pounds Per Square Inch (psi)					