

NLGA Standard Grading Rules for Canadian Lumber (2022)

Supplement No. 2

(effective April 1, 2025)

Approved by the NLGA Board

This Supplement is issued to revise the U.S. design values for the Hem-Fir (N) species group published in Paragraphs 905i, 905j, 905l, and 910a of the NLGA Standard Grading Rules for Canadian Lumber (2022).

These revisions follow the approval of the Hem-Fir (N) Dimension Lumber Design Values Reassessment Study by the ALSC Board of Review in October 2024.

905i. RECOMMENDED ALLOWABLE UNIT STRESSES: STRUCTURAL LIGHT FRAMING AND JOISTS & PLANKS (Para. 124) (in psi)

Values are based on a nominal 2" x 12" basis. For size adjustment factors, see Para. 905g a).

Species Comb.	Grade	Extreme Fibre in Bending	Tension Parallel to Grain	Horizontal Shear	Compression		Modulus of Elasticity (million psi)
		"F _b "	"F _t "		Parallel to Grain	Perpendicular to Grain	
		"F _b "	"F _t "	"F _v "	"F _c "	"F _{cperp} "	"E"
Hem-Fir (N)	Select Structural	1300 1200	775 750	145	1700 1650	405	1.7 1.6
	NO. 1 & Better	1200	725		1550		1.7
	NO. 1	1000	575 500		1450 1400		1.6 1.5
	NO. 2	1000	575 500		1450 1400		1.6 1.5
	NO. 3	575	325 275		850 825		1.4 1.3

905j. RECOMMENDED ALLOWABLE UNIT STRESSES: LIGHT FRAMING (Para. 122) (in psi)

Values are based on a nominal 2" x 4" basis. For size adjustment factors, see Para. 905g b).

Species or Species Comb.	Grade	Extreme Fibre in Bending	Tension Parallel to Grain	Horizontal Shear	Compression		Modulus of Elasticity (million psi)	
					Parallel to Grain	Perpendicular to Grain		
		"F _b "	"F _t "		"F _c "	"F _{cperp} "		"E"
Hem-Fir (N)	Const	1150	650 550	145	1750 1700	405	1.5 1.4	
	Stand	650 625	350 300		1500 1450		405	1.4 1.3
	Utility	300	175 150		975 950			1.3 1.2

905i. RECOMMENDED ALLOWABLE UNIT STRESSES: STUDS (Para. 121) (in psi)

Values based on a nominal 2" x 6" basis. For size adjustment factors, see Para. 905g c). For Studs wider than nominal 6", use the property values for NO. 3 grade in Para. 905i and width adjustment factors as listed in Para. 905g a).

Species or Species Combination	Grade	Extreme Fibre in Bending	Tension Parallel to Grain	Horizontal Shear	Compression		Modulus of Elasticity (million psi)
					Parallel to Grain	Perpendicular to Grain	
		"F _b "	"F _t "		"F _c "	"F _{cperp} "	
Hem-Fir (N)	Stud	775	450 375	145	925 900	405	1.4 1.3

910. DESIGN VALUES FOR MACHINE GRADED LUMBER

910a. SPECIFIC GRAVITY

Assigned specific gravity values vary depending on the Grade “E” values of machine graded lumber as follows:

Species Combination	Grade “E” (million psi)	Assigned Specific Gravity
Hem-Fir (N)	all Grade “E” values	0.46 0.44