



NORDIC LAM™

DECKING



Built for life



Distributed by:



FSC-CERTIFIED PRODUCTS AVAILABLE



NORDIC LAM™

20F-1.9E

20F-1.9E

ALLOWABLE UNIFORM FLOOR LOADS (psf) – 100%

WIDTH (in.)	DEPTH (in.)	CRITERIA	SPAN (ft)												
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0
12	1-1/2	L/480 LL	41	---	---	---	---	---	---	---	---	---	---	---	---
		L/360 LL	55	---	---	---	---	---	---	---	---	---	---	---	---
		L/240 TL	78	---	---	---	---	---	---	---	---	---	---	---	---
	1-3/4	L/480 LL	65	51	41	---	---	---	---	---	---	---	---	---	---
		L/360 LL	87	68	55	---	---	---	---	---	---	---	---	---	---
		L/240 TL	125	98	77	---	---	---	---	---	---	---	---	---	---
	2-1/8	L/480 LL	117	92	74	60	49	41	---	---	---	---	---	---	---
		L/360 LL	156	123	98	80	66	55	---	---	---	---	---	---	---
		L/240 TL	228	178	141	113	92	76	---	---	---	---	---	---	---
	2-1/2	L/480 LL	190	150	120	97	80	67	56	48	41	---	---	---	---
		L/360 LL	---	200	160	130	107	89	75	64	55	---	---	---	---
		L/240 TL	373	292	232	188	153	127	105	89	75	---	---	---	---
	3-1/2	L/480 LL	---	---	---	---	220	184	155	132	113	97	85	74	65
		L/360 LL	---	---	---	---	---	245	206	175	150	130	113	99	87
		L/240 TL	---	---	---	---	430	357	299	253	215	185	159	138	120

NOTES:

1. Values shown are the maximum uniform loads, in pounds per square foot (psf), that can be applied to the decking in addition to its own weight.
2. Selected decking shall satisfy both live (LL) and total (TL) loads.
3. Table is based on uniform loads, continuous equal spans, and dry-use conditions. Span is measured center to center of supports. The maximum uniform loads are based on a load duration factor, CD, of 1.00 (floor load).
4. Maximum deflection = L/480 or L/360 under live load, and L/240 under total load. Other deflection limits may apply.
5. For preliminary design only. A complete design shall include among other things the verification of a concentrated live load (if applicable), bearing resistance, effect of floor vibration, and fire safety requirements.



20F-1.9E

ALLOWABLE UNIFORM ROOF LOADS (psf) – 115% and 125%

WIDTH (in.)	DEPTH (in.)	CRITERIA	SPAN (ft)												
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0
12	1-1/2	L/240 LL	82	65	52	42	35	29	24	21	---	---	---	---	---
		115% LL	105	82	65	52	42	34	28	23	---	---	---	---	---
		125% TL	105	82	65	52	42	34	28	23	---	---	---	---	---
	1-3/4	L/240 LL	131	103	82	67	55	46	39	33	28	24	21	---	---
		115% LL	169	132	104	84	68	56	46	39	32	27	23	---	---
		125% TL	169	132	104	84	68	56	46	39	32	27	23	---	---
	2-1/8	L/240 LL			147	120	99	82	69	59	50	44	38	33	29
		115% LL			190	153	125	103	86	72	61	52	44	38	33
		125% TL			190	153	125	103	86	72	61	52	44	38	33
	2-1/2	L/240 LL						134	113	96	82	71	62	54	48
		115% LL						171	143	121	102	87	75	65	56
		125% TL						171	143	121	102	87	75	65	56
	3-1/2	L/240 LL												148	131
		115% LL												188	164
		125% TL												188	164

NOTES:

1. Values shown are the maximum uniform loads, in pounds per square foot (psf), that can be applied to the decking in addition to its own weight.
2. Selected decking shall satisfy both live (LL) and total (TL) loads.
3. Table is based on uniform loads, continuous equal spans, and dry-use conditions. Span is measured center to center of supports. The maximum uniform loads are based on a load duration factor, CD, of 1.15 (snow load) or 1.25 (construction load).
4. Maximum deflection = L/240 under live load, and L/180 under total load. Other deflection limits may apply. For deflection limit of L/360 or L/480, use the appropriate value from the Allowable Uniform Floor Loads table. The resulting live load shall not exceed the total load shown.
5. For preliminary design only. A complete design shall include among other things the verification of a concentrated live load (if applicable), bearing resistance, and fire safety requirements.



DESIGN VALUES FOR NORDIC LAM™



DESIGN PROPERTIES ^(1,2,3) (psi)

APPLICATION	DECKING
APPEARANCE GRADE	ARCHITECTURAL
STRESS GRADE	20F-1.9E
EWS LAYUP	20F-ES/CPG
Bending About X-X Axis	
Bending at Extreme Fiber (F_{bx}) ^(4,5)	2000 psi
Longitudinal Shear (F_{vx}) ⁽⁶⁾	250 psi
Compression Perpendicular to Grain (F_{cpx})	450 psi
Shear-Free Modulus of Elasticity (E_x)	1.9E+06 psi
Apparent Modulus of Elasticity ($E_{x,app}$) ⁽⁷⁾	1.8E+06 psi
Bending About Y-Y Axis	
Bending at Extreme Fiber (F_{by}) ⁽⁸⁾	2000 psi
Longitudinal Shear (F_{vy}) ⁽⁶⁾	250 psi
Compression Perpendicular to Grain (F_{cpy})	450 psi
Shear-Free Modulus of Elasticity (E_y)	1.9E+06 psi
Apparent Modulus of Elasticity ($E_{y,app}$) ⁽⁷⁾	1.8E+06 psi
Axially Loaded	
Compression Parallel to Grain (F_c)	1000 psi
Tension Parallel to Grain (F_t)	800 psi
Modulus of Elasticity (E_a) ⁽⁷⁾	1.9E+06 psi
Specific Gravity	0.41
Density (for Member Weight)	35 pcf

- (1) The combinations in this table are applicable to members consisting of 4 or more laminations, unless otherwise noted.
- (2) The tabulated design values are for dry conditions of use. For wet conditions of use, multiply the tabulated values by the wet service factors, C_{Mr} per ANSI/AWC NDS-2012, 5.3.3.
- (3) The tabulated design values are for normal duration of loading. For other durations of loading, see applicable design code (ANSI/AWC NDS-2012, 2.3.2 and Chapter 5).
- (4) Nordic Lam bending members are symmetrical throughout the depth of the member (balanced layups).
- (5) The tabulated design values in bending, F_{bx} , shall be multiplied by a volume factor, C_v . The volume factor formula is: $C_v = (12/d)^{1/10} \times (5.125/b)^{1/10} \times (21/L)^{1/10} \leq 1.0$, where d = beam depth (in.), b = beam width (in.), and L = beam length (ft).
- (6) For non-prismatic members, notched members, members subject to impact or cyclic loading, or shear design of bending members at connections (ANSI/AWC NDS-2012, 3.4.3.3), the design value for shear (F_{vx} and F_{vy}) shall be multiplied by a factor of 0.72.
- (7) The tabulated apparent E values already include a 5% shear deflection. For beam stability and column stability calculations, E_{min} shall be determined by multiplying the tabulated apparent modulus of elasticity by 0.528.
- (8) The F_{by} values shall be permitted to be increased by multiplying by the size factor, $(12/d)^{1/9}$, where d is the beam depth in inches.
- (9) Design of glulam members shall be in accordance to National Design Specification, 2012 Edition.

Refer to Nordic Lam Design and Construction Guide for more information.
Nordic Lam products are listed in APA Product Report PR-L294.



Sustainable Wood Solutions

HEAD OFFICE AND TECHNICAL SERVICES

info@nordicewp.com • www.nordicewp.com
T. 514.871.8526 • F. 514.871.9789

