

5/4X Plank (t=1.0")								
Basic Material Properties	E (psi) = 265,000 (73°F )				Fbt(psi) = 2,200 (73°F )			
Effective Properties (High Temp Reduction)	E' (psi) = 109,687 (125°F)				F'b(psi) = 446 (125°F)			
Deflection Limit	Span (in.)			Span (in.)			Span (in.)	
	12			16			19.2	
	Simple	Multiple		Simple	Multiple		Simple	Multiple
L/480**	271	357		115	151		66	87
L/360**	362	476		153	201		88	116
L/240**	543	841		229	355		133	205
L/240 (Long Term)	362	476		153	201		88	116
Stress	4373	4373		2460	2460		1708	1708

**TABLE NOTES**

1. Table provides limiting uniform load in pounds per square foot (psf) based on the noted deflection criteria. Stress is based on simple span only and thus may occasionally limit span.
2. Effective Modulus Of Elasticity,  $E' = E \cdot Ct$ . Allowable stress under uniform load is based on a temperature modified  $F'b = Fbu \cdot Cd \cdot Ct / 2.5$ . The duration factor,  $Cd$ , is taken as 1.0 and  $Ct$  is based on 125°F. The factor of safety is 2.5.
3. Double-starred (\*\*) deflection limits are based on instantaneous deflection (neglecting creep), and are usually compared to live load only. The L/240 long term row is consistent with the ASTM draft specification and considers creep (creep factor = 1.5) with the limiting uniform load being the TOTAL load value.
4. Effective moment of inertia and section modulus have been reduced assuming 2X4 planks with an 1/8" gap between boards. The values are conservative for wider planks.
5. Multiple span deflection criteria are taken as the 3-span condition ("Skip loading") for uniform load.

2X Plank (t=1.5")									
Basic Material Properties	E (psi) = 265,000 (73°F )					Fbt(psi) = 2,200 (73°F )			
Effective Properties (High Temp Reduction)	E' (psi) = 109,687 (125°F)					F'b(psi) = 446 (125°F)			
Deflection Limit	Span (in.)		Span (in.)		Span (in.)		Span (in.)		
	12		16		19.2		24		
	Simple	Multiple	Simple	Multiple	Simple	Multiple	Simple	Multiple	
L/480**	916	1205	386	508	224	294	115	151	
L/360**	1221	1606	515	678	298	392	153	201	
L/240**	1832	2409	773	1016	447	588	229	301	
L/240 (Long Term)	1221	1606	515	678	298	392	153	201	
Stress	9840	9840	5535	5535	3844	3844	2460	2460	

2X Plank (t=1.5"), Continued									
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Effective Properties (High Temp Reduction)	E' (psi) = 109,687 (125°F)					F'b(psi) = 446 (125°F)			
Deflection Limit	Span (in.)			Span (in.)			Span (in.)		
	30			32			36		
	Simple	Multiple		Simple	Multiple		Simple	Multiple	
L/480**	59	77		48	64		34	45	
L/360**	78	103		64	85		45	59	
L/240**	117	154		97	127		68	89	
L/240 (Long Term)	78	103		64	85		45	59	
Stress	1574	1574		1384	1384		1093	1093	

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10/4 X Plank (t=2.0")									
Basic Material Properties	E (psi) = 265,000 (73°F )				Fbt(psi) = 2,200 (73°F )				
Effective Properties (High Temp Reduction)	E' (psi) = 109,687 (125°F)				F'b(psi) = 446 (125°F)				
Deflection Limit	Span (in.)		Span (in.)		Span (in.)		Span (in.)		
	12		16		19.2		24		
	Simple	Multiple	Simple	Multiple	Simple	Multiple	Simple	Multiple	
L/480**	2171	2856	916	1205	530	697	271	357	
L/360**	2895	3807	1221	1606	707	930	362	476	
L/240**	4343	5711	1832	2409	1060	1394	543	714	
L/240 (Long Term)	2895	3807	1221	1606	707	930	362	476	
Stress	17493	17493	9840	9840	6833	6833	4373	4373	

10/4 X Plank (t=2.0"), Continued									
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Deflection Limit	Span (in.)		Span (in.)		Span (in.)		Span (in.)		
	30		32		36		40		
	Simple	Multiple	Simple	Multiple	Simple	Multiple	Simple	Multiple	
L/480**	139	183	115	151	80	106	59	77	
L/360**	185	244	153	201	107	141	78	103	
L/240**	278	366	229	301	161	212	117	154	
L/240 (Long Term)	185	244	153	201	107	141	78	103	
Stress	2799	2799	2460	2460	1944	1944	1574	1574	

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Deflection Limit	Span (in.)		Span (in.)		Span (in.)		Span (in.)	
	12		16		19.2		24	
	Simple	Multiple	Simple	Multiple	Simple	Multiple	Simple	Multiple
L/480**	4241	5577	1789	2353	1035	1362	530	697
L/360**	5655	7437	2386	3137	1381	1816	707	930
L/240**	8482	11155	3578	4706	2071	2723	1060	1394
L/240 (Long Term)	5655	7437	2386	3137	1381	1816	707	930
Stress	27333	27333	15375	15375	10677	10677	6833	6833

3 X Plank (t=2.5"), Continued								
Basic Material Properties	E (psi) = 265,000 (73°F )				Fbt(psi) = 2,200 (73°F )			
Effective Properties (High Temp Reduction)	E' (psi) = 109,687 (125°F)				F'b(psi) = 446 (125°F)			
Deflection Limit	Span (in.)		Span (in.)		Span (in.)		Span (in.)	
	30		32		36		48	
	Simple	Multiple	Simple	Multiple	Simple	Multiple	Simple	Multiple
L/480**	271	357	224	294	157	207	66	87
L/360**	362	476	298	392	209	275	88	116
L/240**	543	714	447	588	314	413	133	174
L/240 (Long Term)	362	476	298	392	209	275	88	116
Stress	4373	4373	3844	3844	3037	3037	1708	1708

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