

Nordic X-Lam Sizing

DEFLECTION CRITERIA L/240 under specified total load - Panel thickness (mm)

TL (kPa)	Simple Span							Double Span						
	3,5 m	4,0 m	4,5 m	5,0 m	5,5 m	6,0 m	6,5 m	3,5 m	4,0 m	4,5 m	5,0 m	5,5 m	6,0 m	6,5 m
2,0		78		105		131			78		105		131	
2,5	78		105		131		175	78		105		131		131
3,0		105		131		175			105		131		175	
3,5			131		175		220			131		175		220
4,0				175		220					175		220	
4,5	105				220			105				220		
5,0		131							131					
5,5			175							175				
6,0				220							220			
6,5					220							220		
7,0						220							220	
7,5	131							131						
8,0		175							175					

DEFLECTION CRITERIA L/360 under specified live load - Panel thickness (mm)

LL (kPa)	Simple Span							Double Span						
	3,5 m	4,0 m	4,5 m	5,0 m	5,5 m	6,0 m	6,5 m	3,5 m	4,0 m	4,5 m	5,0 m	5,5 m	6,0 m	6,5 m
2,0	78		105		131		175	78		105		131		175
2,5		105		131		175			105		131		175	
3,0			131		175		220			131		175		220
3,5	105				220			105				220		
4,0		131							131					
4,5			175							175				
5,0				220							220			
5,5					244							244		
6,0	131		175					131		175				
6,5		175							175					
7,0				220							220			
7,5					244							244		
8,0	175							175						

Notes:

- Sizing (panel thickness shown in millimetres) based on « E1 » stress grade and the correspondance below. The product designation refers to the panel thickness (in mm), the number of layers, and the layup combination ("s" for standard cross layers, and "l" for doubled outermost longitudinal layers). → 78-3s (3-1/8 in.), 105-3s (4-1/8 in.), 131-5s (5-1/8 in.), 175-5s (6-7/8 in.), 220-7s (8-5/8 in.), 244-7l (9-5/8 in.), and 314-9l (12-3/8 in.)
- For preliminary design use only. The design is based on CSA O86-09 and the CLT manual. Final design shall include a complete analysis including the verification of the bearing resistance, a consideration for the floor vibrations if applicable, and fire safety requirements.
- Tables are based on uniform loads, dry-use conditions and standard term load duration, for bending about the longitudinal axis of the panel. Span is measured centre to centre of supports.
- The loads indicated above are the uniform specified total load (TL) or live load (LL). The panels self weight is not considered and shall be included in the specified total load calculation.

5. Maximum deflection = L/240 under specified total load or L/360 under specified live load. Other deflection limits may apply. A 25% reduction in shear stiffness has been used when checking the elastic deflection under total load in order to account for the deformations caused by rolling shear.