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SPAN TABLE

Use as Bearers - supporting two story load bearing walls

PLYLVL 11 D×B (mm)	sheet roof and ceiling												
	Ground Floor Load Width "FLW"												
	1.5						3.0						
	First Floor load width "FLW" (m)												
	1.5			3.0			1.5			3.0			
	Roof load width "RLW" (m)												
	2.4	4.5	6.6	2.4	4.5	6.6	2.4	4.5	6.6	2.4	4.5	6.6	
Maximum Single Span (m)													
2/70*35	0.8	0.8	0.7	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	
2/90*35	1.0	1.0	0.9	1.0	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.9	
2/90*45	1.1	1.1	1.0	1.1	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	
Maximum Continuous Span (m)													
2/70*35	1.1	1.0	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	
2/90*35	1.4	1.3	1.2	1.2	1.1	1.0	1.0	0.9	0.9	0.8	0.8	0.8	
2/90*45	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.1	1.1	1.0	1.0	

PLYLVL 11 D×B (mm)	tile roof and ceiling												
	Ground Floor Load Width "FLW"												
	1.5						3.0						
	First Floor load width "FLW" (m)												
	1.5			3.0			1.5			3.0			
	Roof load width "RLW" (m)												
	2.4	4.5	6.6	2.4	4.5	6.6	2.4	4.5	6.6	2.4	4.5	6.6	
Maximum Single Span (m)													
2/70*35	0.7	0.7	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.7	0.6	0.6	
2/90*35	1.0	0.9	0.8	0.9	0.9	0.8	0.9	0.9	0.8	0.9	0.8	0.8	
2/90*45	1.0	1.0	0.9	1.0	0.9	0.9	1.0	0.9	0.9	1.0	0.9	0.9	
Maximum Continuous Span (m)													
2/70*35	1.0	0.8	0.6	0.8	0.7	0.5	0.7	0.6	0.5	0.6	0.5	0.5	
2/90*35	1.3	1.0	0.8	1.0	0.8	0.7	0.9	0.8	0.7	0.8	0.7	0.6	
2/90*45	1.4	1.3	1.0	1.3	1.1	0.9	1.2	1.0	0.9	1.0	0.9	0.8	



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Note :

1. In accordance with section 4.2.2 of AS 1684.1, when the floor joist supporting floor joist only, the dead load $G=0.4*(FLW)+0.025*(FLW)^2$ +self weight).
2. The wind classification is N3.
3. For multiple spans, the design has assumed the most conservative of 2 spans and that all spans are of equal length.
4. Cantilevers shall not exceed 25% of the allowable span.
5. Span values may be interpolated in accordance with intermediate load and spacing.
6. In accordance with Table 4.1.7, the deflections limits of the rafters is showed below:

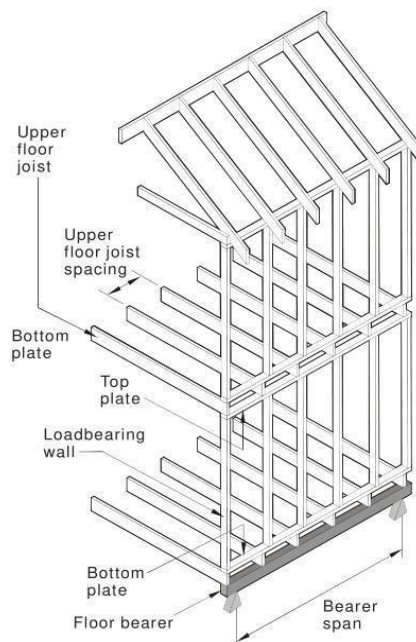
LIMITS ON DEFLECTION

Load category	Limits on deflection	
	Single or continuous span	Overhang (cantilever)
1	Span/300 or 12 mm max.	Overhang/150* or 6 mm max.
2	Span/360 or 9 mm max.	Overhang/180* or 4.5 mm max.

* Where the deflection at the end of the cantilever is upwards, ignore the overhang/150 or overhang/180 limits.

7. According to F-grades division in table H2.1 of AS 1720.1. Stress grade F11 & 17 characteristic values for design are shown in the table below:

	fb'(MPa)	fs'(MPa)	E(MPa)	Density(kg/m³)	fp' (SD4) (MPa)
F11	31	2.8	10500	650	17
F17	42	3.6	14000	650	17





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Use as Strut Beams

PLYLVL1 4 D×B (mm)	sheet roof					tile roof				
	roof area (m ²)									
	6.0	9.0	12.0	15.0	18.0	6.0	9.0	12.0	15.0	18.0
	Maximum Span (m)									
300*30	3.7	2.5	1.9	1.5	1.3	2.8	1.9	1.4	1.1	-
2/300*30	8.0	7.0	6.3	5.9	5.5	6.0	5.2	4.8	4.4	4.2
90*35	1.0	-	-	-	-	0.7	-	-	-	-
2/90*35	1.9	1.3	1.0	0.8	-	1.4	0.9	0.7	-	-
120*35	1.7	1.1	-	-	-	1.3	-	-	-	-
2/120*35	3.4	2.3	1.7	1.4	1.1	2.5	1.7	1.3	1.1	-
140*35	2.3	1.5	1.2	-	-	1.7	1.1	-	-	-
2/140*35	3.9	3.1	2.3	1.9	1.5	2.9	2.3	1.7	1.4	1.1
90*45	1.2	0.8	-	-	-	0.9	-	-	-	-
2/90*45	2.4	1.6	1.2	1.0	0.8	1.8	1.2	0.9	0.7	-
140*45	3.0	2.0	1.5	1.2	-	2.2	1.5	1.1	-	-
2/140*45	4.3	3.7	3.0	2.4	2.0	3.2	2.8	2.2	1.8	1.5
150*45	3.4	2.3	1.7	1.4	-	2.5	1.7	1.3	-	-
2/150*45	4.6	4.0	3.4	2.7	2.3	3.4	3.0	2.5	2.0	1.7
190*45	4.6	3.6	2.7	2.2	1.8	3.5	2.7	2.0	1.6	-
2/190*45	5.8	5.0	4.6	4.3	3.6	4.3	3.8	3.5	3.2	2.7
200*45	4.8	4.0	3.0	2.4	2.0	3.6	3.0	2.3	1.8	-
2*200*45	6.1	5.3	4.8	4.5	4.0	4.6	4.0	3.6	3.4	3.0
240*45	5.8	5.1	4.0	3.2	2.7	4.4	3.8	2.9	2.4	2.0
2/240*45	7.3	6.4	5.8	5.4	5.1	5.5	4.8	4.4	4.0	3.8
290*45	7.0	6.1	5.0	4.0	3.4	5.3	4.6	3.7	3.0	2.5
2/290*45	8.8	7.7	7.0	6.5	6.1	6.6	5.8	5.3	4.9	4.6
300*45	7.2	6.3	5.2	4.2	3.5	5.5	4.8	3.9	3.1	2.6
2/300*45	9.1	8.0	7.2	6.7	6.3	6.9	6.0	5.5	5.1	4.8
90*63	1.7	1.2	0.9	-	-	1.3	0.9	-	-	-
2/90*63	3.1	2.3	1.7	1.4	1.2	2.3	1.7	1.3	1.0	0.9
95*63	1.9	1.3	1.0	0.8	-	1.4	0.9	-	-	-
2/95*63	3.2	2.5	1.9	1.5	1.3	2.4	1.9	1.4	1.1	0.9
130*63	3.5	2.4	1.8	1.4	1.2	2.6	1.8	1.3	1.1	-
2/130*63	4.4	3.9	3.5	2.9	2.4	3.3	2.9	2.6	2.1	1.8
150*63	4.0	3.2	2.4	1.9	1.6	3.0	2.4	1.8	1.4	1.2
2/150*63	5.1	4.5	4.0	3.8	3.2	3.8	3.4	3.0	2.8	2.4
200*63	5.4	4.7	4.2	3.4	2.8	4.1	3.6	3.1	2.5	2.1
2/200*63	6.8	5.9	5.4	5.0	4.7	5.1	4.5	4.1	3.8	3.6
240*63	6.5	5.7	5.1	4.8	4.1	4.9	4.3	3.9	3.6	3.0
2/240*63	8.2	7.1	6.5	6.0	5.7	6.1	5.4	4.9	4.5	4.3
300*63	8.1	7.1	6.4	6.0	5.6	6.1	5.3	4.8	4.5	4.2
2/300*63	10.2	8.9	8.1	7.5	7.1	7.7	6.7	6.1	5.7	5.3
360*63	9.7	8.5	7.7	7.2	6.7	7.3	6.4	5.8	5.4	5.1
2/360*63	12.2	10.7	9.7	9.0	8.5	9.1	8.5	7.3	6.8	6.4
240*64	6.5	5.7	5.2	4.8	4.1	4.9	4.3	3.9	3.6	3.1
2/240*64	8.2	7.2	6.5	6.0	5.7	6.2	5.4	4.9	4.6	4.3



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Note :

1. In accordance with section 2.5.2.2 of AS 1684.1, the standardized roof mass is 20 kg/m^2 for sheet roofs and 60 kg/m^2 for sheet roofs and 60 kg/m^2 for sheet roofs.
2. The wind classification is N3.
3. A is the area of roof supported by the strutting beam.
4. Span values may be interpolated in accordance with intermediate load and spacing.
5. In accordance with Table 2.5.6, the deflections limits of the rafters is showed below:

LIMITS ON DEFLECTION

Load category	Deflection limits
1	Span/300 or 20 mm max.
2	Span/250 or 20 mm max.

6. According to F-grades division in table H2.1 of AS 1720.1. Stress grade F11 & 17 characteristic values for design are shown in the table below:

	fb'(MPa)	fs'(MPa)	E(MPa)	Density(kg/m ³)	fp' (SD4) (MPa)
F11	31	2.8	10500	650	17
F17	42	3.6	14000	650	17

7. the area of roof supported by strutting beam is the sum of, half the underpurlin spans either side of the strut ($0.5*A$), multiplied by the sum of three quarters of the rafter span either side of the underpurlin ($3/4*B$).

