



COMPARISON OF MATERIAL WEIGHTS FOR LAMINATED SPAR CONSTRUCTION

Thickness	Width	Length	Number	Volume (mm ²)
10	75	7000	4	2100000
10	75	6900	1	5175000
10	75	6300	1	4725000
10	75	4800	1	3600000
10	75	4200	1	3150000
10	75	3600	1	2700000
15	15	3400	4	3060000
15	15	1600	6	2160000

TOTAL VOLUME (mm³) 45570000

TOTAL VOLUME (m³) 0.04557

Material	Density (kg/m ³)	Weight(kg)	Weight (lb)
Spruce Canada	430	19.595	43.20
Spruce Canada	440	20.051	44.20
Spruce UK	385	17.544	38.68
Hoop Pine AUS	530	24.152	53.25

COMPARISON OF MATERIAL WEIGHTS FOR BALANCE OF WING CONSTRUCTION

Thickness	Width	Length	Number	Volume (mm ²)
10	18	3200	12	6912000
8	15	320	14	537600
15	18	1100	4	1188000
15	18	1650	2	891000
8	25	200	16	640000
6	30	1650	2	594000
15	30	1650	1	742500
10	10	7500	1	750000
10	10	3000	1	300000
10	10	3000	1	300000
15	150	325	6	4387500
15	75	1300	2	2925000
15	100	1200	1	1800000
1	15	1600	4	96000
6	15	400	1	36000
10	30	800	2	480000
8	8	300	8	153600
10	10	250	1	25000
10	10	250	1	25000

TOTAL VOLUME (mm³) 22783200

TOTAL VOLUME (m³) 0.0227832

Material	Density (kg/m ³)	Weight(kg)	Weight (lb)
Spruce Canada	430	9.797	21.60
Spruce Canada	440	10.025	22.10
Spruce UK	385	8.772	19.34
Hoop Pine AUS	530	12.075	26.62

Penalty for complete wing (lb) 15.07