'R' VALUES OF SOME COMMON TIMBERS USED FOR THERMAL BREAKS IN CONSTRUCTION

Timber Species or Type	Thickness	R Value	Density	Thermal Conductivity ($Wm^{-1}K^{-1}$)	Reference Source
Radiata Pine	18mm	0.15	506Kg/m3	0.12	NCC Vol 1 Specification 36 Table S36C (a) and (d)
	25mm	**0.21**			
	35mm	**0.29**			
	70mm	**0.58**			
Plywood	19mm	0.14	530Kg/m3.14	0.14	NCC Vol 1 Specification 36 Table S36C (d)
	22mm	0.16			
	25mm	0.18			
	28mm	**0.20**			
	81mm	**0.58**			
Particleboard	19mm	0.16	640Kg/m3	0.12	NCC Vol 1 Specification 36 Table S36C (d)
	22mm	0.18			
	32mm	**0.27**			
	70mm	**0.58**			
Hardwood - kiln dried	19mm	0.12	677Kg/m3	0.16	NCC Vol 1 Specification 36 Table S36C (d)
	32mm	**0.2**			
	93mm	**0.58**			
Thickness needed to reach 'R' 0.2 min					
Thickness needed to reach Cavi-BreakTM 'R' value					

'R' Value of material is calculated by dividing the thickness of the material in metres by the thermal conductivity Eg, 19mm divided by 1000 = 0.019 then divided by 0.12 = 0.15833 (say 'R' 0.16)