

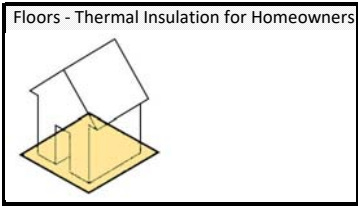
Generic Floor - each column represents a possible floor layer										Recommended Minimal U-values		Residential Construction ADoc L1A & L2B Floor U-value thickness Calculation	
<<< Overall Thickness of the External Floor >>>										W/m2degC		mm Reference & File Name	
Under	Line of DPM (Damp Proof Membrane) >>				125	125		50	18	0.13	318 Q U-Floor 0.13 125c125i PA 0.5.pdf		
					125	150		50	18		343 C U-Floor 0.13 150c130i PA 0.5.pdf		
					110	150			65		325 K U-Floor 0.13 65s150x110i PA 0.5 .pdf		
Above						150		130	18	0.13	298 K A-Floor 0.13 18t130i150c PA 0.5.pdf		
						125	125		18	0.13	268 Q A-Floor 0.13 18t125i125c PA 0.5.pdf		
						125	130		18	0.13	273 C A-Floor 0.13 18t130i125c PA 0.5.pdf		
				50		100	130		18	0.13	298 C A-Floor 0.13 18t130i150bb PA 0.5.pdf		
						150	70		18	0.22	238 K A-Floor 0.21 18t70i150c PA 0.5.pdf		
Between						150		60	18	0.25	228 K A-Floor 0.24 18t60i150c PA 0.5.pdf		
						125	130		65	0.13	320 C B-Floor 0.13 65s130i150c PA 0.5.pdf		
						125	130		60	0.13	315 Q B-Floor 0.13 60s130i125c PA 0.5.pdf		
				50		100	140		50	0.13	340 Q B-Floor 0.13 50s140i150bb PA 0.5.pdf		
						150	110		65	0.13	325 K B-Floor 0.13 65s110i150c PA 0.6.pdf		
15= soffit board 15= soffit board						150		60	60	0.22	270 Q B-Floor 0.22 60s60i150c PA 0.5.pdf		
						15	25	200	50	18	0.13	308 C B-Floor 0.13 18t200i PA 0.5.pdf	
				15	25	75	175		18	0.12	308 X S-Floor 0.12 18t100c75i75i25c15p		

Notes
 *If well ventilated then external layer disregarded - 25mm is normal
 ** 25mm service void recommended for electrics & plumbing

- Calculation Sources
- Celotex <https://www.celotex.co.uk/member/dashboard>
 - Kingspan <https://www.uvalue-calculator.co.uk/calculator/>
 - Quinn <https://uvaluecalculator.quinn-buildingproducts.com/>
 - YourSpreadsheets <https://www.yourspreadsheets.co.uk/u-value-calculator-to-bs-en-iso-6946.html>
- REF: <https://www.homebuilding.co.uk/insulating-floors/>

Summary
 - 125mm insulation gives 0.13 U-value ____
 - 70mm insulation gives 0.22 U-value ____
 - 60mm insulation gives 0.25 U-value ____
 increase thickness by 50% for between joist

- Timber Floors
- 308 C B-Floor 0.13 18t200i PA 0.5.pdf
 - 308 X S-Floor 0.12 18t100c75i75i25c15p



See foot note for pdf File Names/Codes etc...

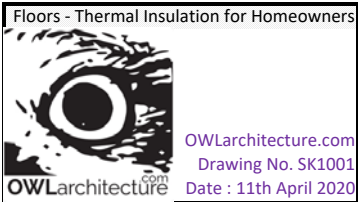
Element or system	Values
Opening areas (windows and doors)	Same as actual dwelling up to a maximum proportion of 25% of total floor area ¹
External walls (including opaque elements of curtain walls)	0.18 W/(m ² K)
Party walls	0.0 W/(m ² K)
Floor	0.13 W/(m ² K)
Roof	0.13 W/(m ² K)
Windows, roof windows, glazed roof-lights and glazed doors	1.4 W/(m ² K) (whole window U-value) ² g-value = 0.63 ³
Opaque doors	1.0 W/(m ² K)
Semi-glazed doors	1.2 W/(m ² K)
Airtightness	5.0 m ³ /(h.m ²)
Linear thermal transmittance	Standardised psi values – see SAP 2012 Appendix R, except use of $\psi = 0.05 \text{ W/(m}^2\text{K)}$ if the default value of $\psi = 0.15 \text{ W/(m}^2\text{K)}$ is used in the actual dwelling
Ventilation type	Natural (with extract fans) ⁴
Air-conditioning	None

<< From Approved Document L1A

<< 0.18 or lower - Walls

<< 0.13 or lower - Floors

<< 0.13 or lower - Roofs



Footnote for pdf filenames - PREFIX: C is Celotex Calculation, K is Kingspan Calc, Q is Quinn Calc, X is Generic Calc, Z is Belt & Braces Calculation
 2nd Letter: C is Cavity Wall, D is Dormer Wall, S is Solid Wall, P is a SIPs Wall (Structural Insulated Panel normally 142 mm)
 2nd Letter: F is Flat roof, P is Pitched roof insulation at rafters, L is Pitched roof insulation at ceiling joists/Loft
 3rd/4th Letter: A is insulation above, B is insulation between eg. rafters, joist and concrete layers etc..., U is insulation under
 Thickness of elements in numbers followed by:
 (a) is cavity (may be including space between joists etc..., (b) is brick/block, (c) is concrete, (f) is finish, (i) is insulation, (m) is stone masonry, (p) is plaster, (s) is screed, (t) is timber or board, (c-c) is centre to centre
 PA is Perimeter/Area ratio