

Pitched Roof - Insulation between and under rafters (fully filled - no sarking board)

Horley Town Council

07/07/2025

U Value
0.12 W/(m²·K)

Layer	Material	Thickness mm	Lambda W/(m·K)	R value m ² ·K/W
External Surface Resistance				0.100
Roof tiles	TILES / SLATES & BATTENS	30		0.000
Counter Battens	highly-ventilated	38		0.000
Membrane	KINGSPAN NILVENT BREATHABLE MEMBRANE	0.5		0.006
Insulation between rafters	KOOLTHERM K107 - (BETWEEN TIMBER RAFTERS)	150	0.019	7.895
Bridging rafters	TIMBER RAFTERS (47mm@400mm)		0.130	0.000
Bridge percentage	13%			
Insulated-Plasterboard	KOOLTHERM K118 62.5mm (12.5mm plasterboard internal finish)	62.5		2.697
Internal finish	PLASTER SKIM	3	0.180	0.017
Internal Surface Resistance				0.100

U-values calculated to BS EN ISO 6946:2017 or BS EN ISO 13370:2017 depending on application. For floor calculations the u-value result is dependent on the exposed perimeter and area entered into the calculator for each individual floor calculation. Soil type thermal conductivity taken as 1.5 W/mK, relevant to Clay/Silt. The physical and chemical properties of the products of Kingspan Insulation represent average values obtained by testing in accordance with generally accepted standards and are subject to standard tolerances.

Kingspan Insulation reserves the right to amend product specifications and thicknesses without prior notice. The information, calculations, technical details and fixing instructions included in any documentation or advice including this calculation are given in good faith and apply only to uses described in this context.

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For wall applications (excluding K-roc)

There are potential restrictions placed upon this product which vary dependant on building type, height, construction and location. For guidance regarding the routes to compliance for meeting the fire safety requirements of the Building Regulations /Standards, refer to the relevant Technical Bulletins and links to Government websites at www.kingspaninsulation.co.uk/fireregulations