

PITCHED ROOFING INSULATION BOARD

Typical U-values (W/m²K) achieved in common pitched roof constructions

Insulation Over/Over And Between Rafters

- Tiles, battens, and ventilated counterbatten void
- Breather membrane
- TIL-R Pitched Roofing Insulation Board over rafters, stainless steel fixings, 6.7 per m²
- 50mm wide timber rafters, depth and centres as indicated
- TIL-R Pitched Roofing Insulation Board between rafters, as indicated
- Low-emissivity clear cavity, unvented
- Plasterboard finish

Insulation over rafters (mm)	Insulation between rafters (mm)	Rafter Centres		
		400mm	600mm	
Insulation over rafters				
50	n/a	0.33	0.34	min. 100mm deep rafters
75	n/a	0.24	0.24	
90	n/a	0.21	0.21	
100	n/a	0.19	0.19	
110	n/a	0.17	0.17	
120	n/a	0.16	0.16	
140	n/a	0.14	0.14	
150	n/a	0.13	0.13	
Insulation over and between rafters				
40	40	0.26	0.25	min. 100mm deep rafters
50	50	0.22	0.21	
60	60	0.19	0.18	
70	70	0.16	0.16	
75	75	0.15	0.15	
80	80	0.14	0.14	
90	90	0.13	0.12	min. 150mm deep rafters
100	100	0.12	0.11	
110	110	0.11	0.10	
120	120	0.10	0.10	

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Insulation Between And Under Rafters

- Unventilated roof construction
- Tiles and battens
- Breather membrane
- Low-emissivity rafter cavity, unvented
- Thickness indicated in first column, between rafters (spacing as indicated)
- Board fixed below rafters
- VCL
- Plasterboard finish

Insulation Thickness Under Rafters										
	25mm		40mm		50mm		60mm		75mm	
	400 cts	600 cts	400 cts	600 cts	400 cts	600 cts	400 cts	600 cts	400 cts	400 cts
75mm	0.24	0.23	0.20	0.19	0.19	0.18	0.17	0.16	0.15	0.15
80mm	0.23	0.22	0.20	0.19	0.18	0.17	0.17	0.16	0.15	0.14
90mm	0.22	0.20	0.19	0.18	0.17	0.16	0.16	0.15	0.14	0.14
100mm	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.14	0.14	0.13
110mm	0.19	0.18	0.17	0.16	0.16	0.15	0.14	0.14	0.13	0.12
120mm	0.18	0.17	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.12
130mm	0.17	0.16	0.15	0.14	0.14	0.13	0.13	0.12	0.12	0.11
140mm	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.12	0.12	0.11
150mm	0.16	0.14	0.14	0.13	0.13	0.12	0.12	0.12	0.11	0.11

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