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U-value calculation by BRE U-value Calculator version 2.04a - Printed on 25 Mar 2024 at 13:32

Filename: TrioQuilt 0.15 U-value - 125mm Rafters, 600mm Centres.uva (File saved: 25 Mar 2024 13:32)

Element type: Roof - Pitched roof - insulated slope, sloping ceiling - Calculation Method: BS EN ISO 6946

TrioQuilt 0.15 U-value - 125mm Rafters, 600mm Centres

Layer	d (mm)	λ layer	λ bridge	Fraction	R layer	R bridge	Description
					0.100		Rsi
1	12.5	0.210			0.060		Plasterboard (standard wallboard)
2	25	R-value ¹	0.130	0.0630	0.490	0.192	25mm Battens
3	7	R-value	R-value	0.0120	1.520	0.670	SuperQuilt
4	50	R-value ²	0.130	0.0630	0.490	0.385	50mm Battens
5	7	R-value	R-value	0.0120	1.520	0.670	SuperQuilt (Under Rafters - Taut)
6	100	0.040	0.130	0.0833	2.500	0.769	100mm Rafters / EcoLoft Non-Itch
7	25	R-value	0.130	0.0833	0.160	0.192	25mm Rafters / Cavity
8							Breather membrane
9	25	R-value					25mm Battens
10	15	1.000					Tiles (clay)
					<u>0.100 #</u>		Rse
	<u>267 mm</u>	(total roof thickness)			<u>6.940</u>		

¹Calculated with specified emissivity of 0.02

²Calculated with specified emissivity of 0.02

this resistance substitutes for Rse and the resistance of layers 9-10 because of the ventilated air layer (layer 9)

Total resistance: Upper limit: 6.707 Lower limit: 6.450 Ratio: 1.040 Average: 6.578 m²K/W

U-value (uncorrected) 0.152

U-value corrections

Air gaps in layer 6 $\Delta U = 0.000$ (Level 0)

No fixings in layer 5

Total ΔU 0.000

U-value (corrected) 0.152

U-value (rounded) 0.15 W/m²K

Calculated By;

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