

Project ID : P-1035667 17 Boscastle Road NW5 1EE
 Structure element : Flat roof
 Description : Flat roof - insulation / membrane fixed with mechanical fixings
 File reference : 1Z1581421E.FCF

Calculated 'U' value = 0.18W/m²K (Calculated in accordance with BS EN ISO 6946:2017)

RT02

Element Description	Element Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MN/gm)	Vapour Resistance (MN/g)	Mean T (K)	Delta T (K)
Outside surface resistance	-	-	0.040	-	-	80.74	0.07
SINGLE PLY MEMBRANE (mechanically fixed)	1.5	0.160	0.009	-	138.00	80.79	0.02
PLYWOOD DECKING	18.0	0.140	0.129	520.00	9.36	80.91	0.23
KINGSPAN THERMAROOF TR26 LPC / FM	90.0	0.022	4.091	-	100.00	84.74	7.43
1000 GAUGE 0.25mm POLYTHENE VAPOUR CONTROL LAYER	0.3	-	0.001	-	500.00	88.46	0.00
PLYWOOD DECKING	18.0	0.140	0.129	520.00	9.36	88.58	0.23
KINGSPAN THERMAPITCH TP10 - Between joists 12.7% roof timber - 47mm @ 400mm ctrs + 1% for noggins + loft hatches (40.0mm)	40.0	0.022	1.818	-	100.00	90.34	3.30
TIMBER JOIST CAVITY; U/V. 12.7% roof timber - 47mm @ 400mm ctrs + 1% for noggins + loft hatches (110.0mm)	110.0	-	0.454	-	0.05	92.41	0.82
PLASTERBOARD	12.5	0.190	0.066	50.00	0.63	92.88	0.12
PLASTER SKIM	3.0	0.180	0.017	60.00	0.18	92.95	0.03
Inside surface resistance	-	-	0.100	-	-	93.06	0.18

Detailed U-value Calculation Results

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Whilst the information and/or specification contained herein is to the best of our knowledge true and accurate we specifically exclude any liability for errors, omissions or otherwise arising herefrom. Details, practices, principles, values and calculations should be verified as to accuracy and suitability for the required purpose for use.

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 Humidity Class: 3 - Dwellings with low occupancy
 Location: 5a England SE & Central South

Condensation calculations performed in accordance with BS5250: 2011

RT02

Condensation is occurring at the following layers interfaces:-
 Interface 1 : SINGLE PLY MEMBRANE (mechanically fixed) / PLYWOOD DECKING

Month	Int (°C)	Int (%RH)	Ext (°C)	Ext (%RH)	Interface 1	
					Gc (Kg/m ²)	Ma (Kg/m ²)
Jan	20.0	61.5	1.5	90.0	0.00	0.00
Feb	20.0	60.4	1.8	86.5	0.00	0.00
Mar	20.0	59.7	3.7	84.0	0.00	0.00
Apr	20.0	59.1	6.0	81.0	0.00	0.00
May	20.0	61.0	9.3	81.0	0.00	0.00
Jun	20.0	63.8	12.4	80.0	0.00	0.00
Jul	20.0	67.3	14.5	80.5	0.00	0.00
Aug	20.0	68.0	14.1	82.5	0.00	0.00
Sep	20.0	66.2	11.8	85.5	0.00	0.00
Oct	20.0	63.9	8.7	88.0	0.00	0.00
Nov	20.0	61.8	4.4	89.5	0.00	0.00
Dec	20.0	61.7	2.5	90.5	0.00	0.00

Gc = Monthly moisture accumulation per area at an interface
 Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00 Kg/m²

Annual moisture accumulation (Ma) = 0.00 Kg/m²

Peak moisture build-up month : January

Internal conditions : 20.0°C @ 61.5%RH
 External conditions : 1.5°C @ 90.0%RH

