



Protect Membranes

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Calculation of interstitial condensation

by ICond Calculator version 2.03

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Element type: Wall

Calculation Method: BS EN ISO 13788

Wall Type 1 - 169mm SIP

Construction Details

Layer	d mm	λ W/m·K	rv MN·s/g·m	R layer m ² K/W	Rv layer MN·s/g	Description
				0.130		Rsi
1	12.5	0.210	60.0	0.060	0.75	Plasterboard
2	25	R-value	Rv-value	0.780	0.050	Cavity unventilated
3			Rv-value		689	Protect VC Foil Ultra Ins AVCL Membrane
4	11	0.130	50.0	0.085	0.55	SIP - OSB
5	147	0.030	5.00	4.800	0.72	SIP - Lambdatherm EPS
6	11	0.130	50.0	0.085	0.55	SIP - OSB
7			Rv-value		1.0	Protect TF200 Thermo Ins Breather Membrane
8	60	R-value	Rv-value	0.770	0.050	Cavity unventilated
9	102.5	0.770	50.0	0.133	5.1	Brick outer leaf
				<u>0.040</u>		Rse
	<u>366 mm (total wall thickness)</u>			<u>6.882</u>	<u>698</u>	

Boundary conditions

Manchester (Edinburgh.hgt)

Return period 2 years (mean external temperature and RH)

Internal Humidity: BS 5250 Class 3

Results

No condensation

The U value result has been determined as follows:

Bridging:

A thermal bridge percentage for the timber studs of 12.5% has been used in accordance with BR 443: 2006 Conventions for U values (section 4.5.1 (ii)).

Correction level:

A correction level of 0 has been used in accordance with Table F1 of BS EN ISO 6946: 2017 Building components and Building elements - Thermal transmittance - Calculation methods.

Please check to confirm and advise if any amendments are required.

Calculated by Protect Technical Services

