



Protect Membranes
2 Brooklands Road, Sale, Cheshire M33 3SS

Telephone **0161 905 5700**
Fax **0161 905 2085**
Email info@protectmembranes.com
Website www.protectmembranes.com

Calculation of interstitial condensation

by ICond Calculator version 2.03

Printed on 02 Mar 2018 at 13:22

Element type: **Wall**

Wall Type 2 - 169mm SIP

Construction Details

Layer	d mm	λ W/m·K	r_v MN·s/g·m	R layer m ² K/W	Rv layer MN·s/g	Description
				0.130		Rsi
1	12.5	0.160		0.078		Vapourcheck plasterboard
2			Rv-value		689	Protect VC Foil Ultra Insulating AVCL Membrane
3	22	R-value	Rv-value	0.780	0.050	Cavity unventilated
4	11	0.130	50.0	0.085	0.55	SIP - OSB
5	147	0.030	5.00	4.900	0.73	SIP - Lambdatherm EPS
6	11	0.130	50.0	0.085	0.55	SIP - OSB
7			Rv-value		1.0	Protect TF200 Breather Membrane
8	12	0.210	50.0	0.057	0.60	Magnesium Oxide Board
9	5	0.570	40.0	0.009	0.20	Render
				<u>0.040</u>		Rse
	<u>221 mm</u> (total wall thickness)			6.163	693	

Boundary conditions

Manchester (Edinburgh.hgt)

Return period 2 years (mean external temperature and RH)

Internal Humidity: BS 5250 Class 3

Results

No condensation

Month	Internal T °C	Internal RH %	External T °C	External RH %	RH % at internal surface
October	20.0	62	10.6	83	63
November	20.0	59	6.4	85	60
December	20.0	58	4.6	86	59
January	20.0	57	3.9	85	58
February	20.0	56	3.9	82	57
March	20.0	56	5.7	79	57
April	20.0	55	8.0	75	56
May	20.0	57	11.3	73	58
June	20.0	62	14.2	75	62
July	20.0	65	15.8	75	65
August	20.0	66	15.7	77	66
September	20.0	64	13.5	80	65

Calculated by Protect Technical Services

