



**U-value calculation**

by BRE U-value Calculator version 1.20c

Printed on 04 Oct 2007 at 13:17

Filename: C:\Program Files\U-value Calculator\117 Platinum wall.uva (File saved: 04 Oct 2007 13:16)

Element type: Wall – 117mm Wall Structural insulated panel.

Calculation Method: BS EN ISO 6946

**117 Platinum wall SIP**

<u>Layer</u>	<u>d (mm)</u>	<u>λ layer</u>	<u>λ bridge</u>	<u>Fraction</u>	<u>R layer</u>	<u>R bridge</u>	<u>Description</u>
					0.130		Rsi
1	12.5	0.210			0.060		Plasterboard (standard wallboard)
2	22	R-value	0.130	0.118	0.180	0.169	Drylining - timber battens
3	9	0.130			0.069		SIP - OSB
4	97	0.030	0.130	0.0400	3.233	0.746	SIP - insulation
5	9	0.130			0.069		SIP - OSB
6							Breather membrane
7	50	R-value			0.180		Cavity unventilated
8	103	0.770			0.134		Brick outer leaf
					<u>0.040</u>		Rse
	<u>303 mm</u>	(total wall thickness)			<u>4.095</u>		

Total resistance: Upper limit: 3.855 Lower limit: 3.713 Average: 3.784 m²K/W

U-value 0.264

**U-value (rounded) 0.26 W/m²K**

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Filename: C:\Program Files\U-value Calculator\117 Platinum wall.uva (File saved: 04 Oct 2007 13:16)

**Element type: Wall – 167mm Wall Structural Insulated Panel**

Calculation Method: BS EN ISO 6946

<u>Layer</u>	<u>d (mm)</u>	<u>λ layer</u>	<u>λ bridge</u>	<u>Fraction</u>	<u>R layer</u>	<u>R bridge</u>	<u>Description</u>
					0.130		Rsi
1	12.5	0.210			0.060		Plasterboard (standard wallboard)
2	22	R-value	0.130	0.118	0.180	0.169	Drylining - timber battens
3	9	0.130			0.069		SIP - OSB
4	145	0.030	0.130	0.0400	4.833	1.115	SIP - insulation
5	9	0.130			0.069		SIP - OSB
6							Breather membrane
7	50	R-value			0.180		Cavity unventilated
8	103	0.770			0.134		Brick outer leaf
					<u>0.040</u>		Rse
	<u>351 mm</u> (total wall thickness)					<u>5.695</u>	

Total resistance: Upper limit: 5.295 Lower limit: 5.125 Average: 5.210 m<sup>2</sup>K/W

U-value 0.192

**U-value (rounded) 0.19 W/m<sup>2</sup>K**

Calculated by:



**U-value calculation**

by BRE U-value Calculator version 1.20c  
 Printed on 04 Oct 2007 at 13:22

**Element type: Roof – 167mm Roof Structural Insulated Panel**

Calculation Method: BS EN ISO 6946

<u>Layer</u>	<u>d (mm)</u>	<u>λ layer</u>	<u>λ bridge</u>	<u>Fraction</u>	<u>R layer</u>	<u>R bridge</u>	<u>Description</u>
					0.100		Rsi
1	12.5	0.210			0.060		Plasterboard (standard wallboard)
2	22	R-value	0.130	0.118	0.180	0.169	Drylining - timber battens
3	11	0.130			0.085		SIP - OSB
4	147	0.030	0.130	0.0200	4.900	1.131	SIP - insulation with timber
5	11	0.130			0.085		SIP - OSB
6	50	R-value					Air layer ventilated
7	22	0.130					Counter Timber battens
8	22	0.130					Timber battens
9	12	1.000					roof tiles
					<u>0.100 #</u>		Rse
	<u>310 mm</u>	(total roof thickness)			<u>5.509</u>		

# this resistance substitutes for Rse and the resistance of layers 6-9 because of the ventilated air layer (layer 6)

Total resistance: Upper limit: 5.279 Lower limit: 5.201 Average: 5.240 m<sup>2</sup>K/W

U-value 0.191

***U-value (rounded) 0.19 W/m<sup>2</sup>K***

Calculated by: