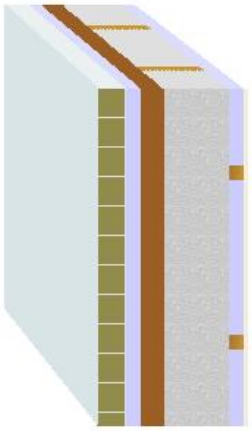
Fergal Flatley
Technical Support
LL Structures PASSIVE 220

Documentation of the component
Thermal transmittance (U-value) according to BS EN ISO 6946
Source: **own catalogue - External walls**
Component: **LL Structures PASSIVE220**

OUTSIDE INSIDE



This illustration of inhomogeneous layers is provided only to assist in visualising the arrangement.

On the basis of the given information about the inhomogeneous layers, it is not possible to estimate how and where bearing elements intersect each other. It was assumed that the layers intersect crosswise. The size of the areas was calculated corresponding to their percentage of the whole area.

Assignment: External wall

		Manufacturer	Name	Thickness [m], number	Lambda [W/(mK)]	Q	R [m²K/W]
		Rse					0.1300
☐	1	Generic Building Materials	Concrete block (dense) outer leaf (1800 kg/m³) & Mortar outer leaf (f = 0.000 / automatic disregarding acc. BRE 4.4.3)	0.1000	1.210	D	~~0.0826~~
☐	2	BS EN ISO 6946	Well ventilated air layer	0.0500	0.000	D	-
☑	3	pro clima	Solitex Humida	0.0005	0.100	E	0.0050
☑	4	GUTEX	Multitherm	0.0800	0.040	E	2.0000
		Air gaps	Level 0: dU" = 0.00 W/(m²K)				
☑	5	Inhomogeneous material layer	consisting of:	0.2200	ø 0.045		4.8490
	5a	Dammstatt	Dammstatt	91.00 %	0.037	E	-
	5b	BS EN 12524	Softwood Timber [500 kg/m³]	09.00 %	0.130	D	-
☑	6	pro clima	INTELLO PLUS	0.0002	0.170	E	0.0012
☑	7	Inhomogeneous material layer	consisting of:	0.0500	ø 0.265		0.1889
	7a	BS EN ISO 6946	Unventilated air layer: 50 mm, horiz. heat flow	91.00 %	0.278	D	-
	7b	BS EN 12524	Softwood Timber [500 kg/m³]	09.00 %	0.130	D	-
☑	8	Generic Building Materials	Standard wallboard plasterboard	0.0150	0.210	D	0.0714
		Rsi					0.1300
				0.5157			

☐ was not taken into consideration in the calculation

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$R_T = (R_T' + R_T'')/2 = 7.58$ m²K/W

Correction to U-value for	according to	delta U [W/(m²K)]
Air gaps	BS EN ISO 6946 Annex D	~~0.000~~ 0.000

$U = 1/R_T + \Sigma\Delta U = 0.13$ W/(m²K)

Q .. The physical values of the building materials has been graded by their level of quality. These 5 levels are the following
A .. A: Data is entered and validated by the manufacturer or supplier. Data is continuously tested by 3rd party.
B .. B: Data is entered and validated by the manufacturer or supplier. Data is certified by 3rd party
C .. C: Data is entered and validated by the manufacturer or supplier.
D .. D: Information is entered by BuildDesk without special agreement with the manufacturer, supplier or others.
E .. E: Information is entered by the user of the BuildDesk software without special agreement with the manufacturer, supplier or others.

U_{max} = 0.30 W/(m²K) U = 0.13 W/(m²K) R_T= 7.58 m²K/W

Source of Umax value: England and Wales Approved Document L1A 2010 Tab 2 Dwellings New