

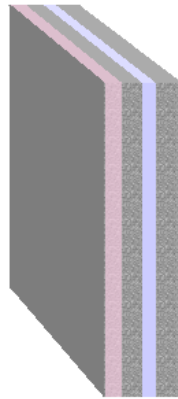
Documentation of the component
Thermal transmittance (U-value) according to BS EN ISO 6946

23. September 2011
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Source: **own catalogue**
Component: **New external wall**

OUTSIDE

INSIDE



Assignment: External wall

	Manufacturer	Name	Thickness [m], number	Lambda [W/(mK)]	Q	R [m²K/W]
		Rse				0.04
<input checked="" type="checkbox"/>	1 WBS	WBS Silicone Render	0.008	0.556	E	0.01
<input checked="" type="checkbox"/>	2 WBS	WBS Phenolic Insulation Board (45+)	0.060	0.020	E	3.00
		Fixings	8/m²	0.500	D	-
		Air gaps	Level 1: dU" = 0.01 W/(m²K)			
<input checked="" type="checkbox"/>	3 Own catalogue	Concrete, Medium density 2000	0.075	1.350	E	0.06
<input checked="" type="checkbox"/>	4 Own catalogue	Normal cavity - 50 mm, unventilated	0.050	0.278	E	0.18
<input checked="" type="checkbox"/>	5 Own catalogue	Concrete, Medium density 2000	0.075	1.350	E	0.06
<input checked="" type="checkbox"/>	6 Own catalogue	Gypsum plastering	0.016	0.382	E	0.04
		Rsi				0.13
						0.284

$$R_T = R_{si} + \sum R_i + R_{se} = 3.52 \text{ m}^2\text{K/W}$$

Correction to U-value for	according to	delta U [W/(m²K)]
Mechanical fasteners	BS EN ISO 6946 Annex D	0.000
Air gaps	BS EN ISO 6946 Annex D	0.007
Air gaps and fixings corrections need not be applied, as their total effect is less than 3% (Annex D BS 6946:1996).		
		0.000

$$U = 1/R_T + \sum \Delta U = 0.28 \text{ W/(m}^2\text{K)}$$

- 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.

$$U_{\max} = \boxed{0.35 \text{ W/(m}^2\text{K)}}$$

$$U = \boxed{0.28 \text{ W/(m}^2\text{K)}}$$

$$R_T = \boxed{3.52 \text{ m}^2\text{K/W}}$$

Source of U_{max} value: England, Wales: Approved Document L1A (2006), Table 2 - New Build Dwellings

Calculated with BuildDesk 3.4.4