

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	<b>E</b>	0.01
<input checked="" type="checkbox"/>	2 WBS	WBS PIR	0.080	0.027	<b>E</b>	2.96
		Fixings	8/m²	0.500	<b>D</b>	-
		Air gaps				
		Level 1: dU" = 0.01 W/(m²K)				
<input checked="" type="checkbox"/>	3 Own catalogue	Render, cement and sand	0.020	1.000	<b>E</b>	0.02
<input checked="" type="checkbox"/>	4 Own catalogue	Concrete, Medium density 2200	0.150	1.650	<b>E</b>	0.09
<input checked="" type="checkbox"/>	5 Own catalogue	Gypsum Plasterboard	0.013	0.250	<b>E</b>	0.05
<input checked="" type="checkbox"/>	6 Own catalogue	Gypsum plastering	0.005	0.382	<b>E</b>	0.01
		Rsi				0.13
			<b>0.276</b>			

$$R_T = R_{si} + \sum R_i + R_{se} = 3.32 \text{ m}^2\text{K/W}$$

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	0.000
<i>Air gaps and fixings corrections need not be applied, as their total effect is less than 3% (Annex D BS 6946:1996).</i>		
		0.000

$$U = 1/R_T + \sum \Delta U = 0.30 \text{ W/(m}^2\text{K)}$$

- 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.

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

$$U = \boxed{0.30 \text{ W/(m}^2\text{K)}} \quad R_T = \boxed{3.32 \text{ m}^2\text{K/W}}$$

Source of U<sub>max</sub> value: England, Wales: Approved Document L1A (2006), Table 2 - New Build Dwellings

Calculated with BuildDesk 3.4.4