

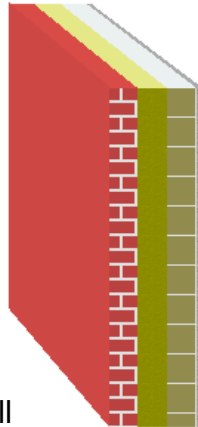


Documentation of the component
 Thermal transmittance (U-value) according to BS EN ISO 6946
 Source: **own catalogue - External walls**
 Component: **Full fill cavity wall with HRT4 ties**

2. January 2009
 Page 1/1

OUTSIDE

INSIDE



Assignment: External wall

	Manufacturer	Name	Thickness [m], number	Lambda [W/(mK)]	Q	R [m ² K/W]
		Rse				0.04
<input checked="" type="checkbox"/>	1	Generic Building Materials	Brick outer leaf & Mortar outer leaf (f = 0.000 / automatic disregarding acc. BRE 4.4.3)	0.102	0.770	D 0.13
<input checked="" type="checkbox"/>	2	Generic Building Materials	Mineral wool batt - Variable thickness	0.100	0.038	D 2.63
		Fixings	Staifix HRT4 76-100mm cavity No./m ² :	2.5/m ²	17.000	C -
		Air gaps	Level 1: dU" = 0.01 W/(m ² K)			
<input checked="" type="checkbox"/>	3	Generic Building Materials	Concrete block (dense) inner leaf (1800 kg/m ³)	0.100	1.130	D 0.09
<input checked="" type="checkbox"/>	4	BS EN 12524	Gypsum [600 kg/m ³]	0.013	0.180	D 0.07
		Rsi				0.13
						0.315

$$R_T = R_{si} + \sum R_i + R_{se} = 3.09 \text{ m}^2\text{K/W}$$

Correction to U-value for	according to	delta U [W/(m ² K)]
Mechanical fasteners	BS EN ISO 6946 Annex D	0.004
Air gaps	BS EN ISO 6946 Annex D	0.007
<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

$$U = 1/R_T + \sum \Delta U = 0.32 \text{ W/(m}^2\text{K)}$$

- 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.

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

$$U = 0.32 \text{ W/(m}^2\text{K)} \quad R_T = 3.09 \text{ m}^2\text{K/W}$$

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

Calculated with BuildDesk 3.3.1