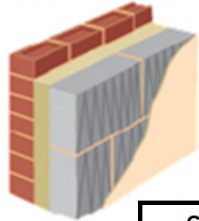


Wall U-Values - Cavity wall, brick outer leaf, full fill

TSD 04-01

U-value calculations in accordance with BS EN ISO 6946 and BRE Conventions for U-value Calculations, BR443



Cavity Insulation conductivity (W/mK)	Cavity thickness (mm)	Solar (2.9N/mm ²)	Standard (3.6N/mm ²)			High or Super Strength (7.3 or 8.7N/mm ²)	
		100mm	100mm	140mm	150mm	100mm	140mm
		U-Value (W/m ² K)					
0.037 e.g. Dritherm 37 Standard	100	0.25	0.27	0.25	0.25	0.27	0.26
	125	0.22	0.23	0.21	0.21	0.23	0.22
	150	0.19	0.20	0.19	0.19	0.20	0.19
0.034 e.g. Dritherm 34 Super	100	0.24	0.25	0.24	0.23	0.26	0.24
	125	0.20	0.21	0.20	0.20	0.22	0.21
	150	0.18	0.18	0.18	0.17	0.19	0.18
0.032 e.g. Dritherm 32 Ultimate	100	0.23	0.24	0.23	0.22	0.24	0.23
	125	0.20	0.20	0.19	0.19	0.21	0.20
	150	0.17	0.17	0.17	0.17	0.18	0.17
0.022 e.g. Recticel Eurowall +	100 *	0.18	0.18	0.17	0.17	0.18	0.18
	125 *	0.15	0.15	0.15	0.14	0.15	0.15
	150 *	0.13	0.13	0.12	0.12	0.13	0.13
0.018 e.g. Kooltherm K106	100 *	0.16	0.16	0.16	0.15	0.16	0.16

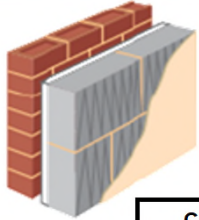
* Includes insulation + 10mm design gap

Above figures are for plasterboard on dabs internal finishes, other finishes will be similar, consult Technical Services for specific values

Wall U-Values - Cavity wall, brick outer leaf, partial fill

TSD 04-02

U-value calculations in accordance with BS EN ISO 6946 and BRE Conventions for U-value Calculations, BR443



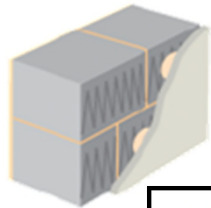
Cavity Insulation conductivity (W/mK)	Insulation thickness (mm)	Solar (2.9N/mm ²)	Standard (3.6N/mm ²)			High or Super Strength (7.3 or 8.7N/mm ²)	
		100mm	100mm	140mm	150mm	100mm	140mm
		U-Value (W/m ² K)					
0.030 (Foil faced, grey EPS) e.g. Alreflex Platinum	50mm	0.28	0.29	0.27	0.27	0.30	0.28
	75mm	0.23	0.23	0.22	0.22	0.24	0.23
	100mm	0.19	0.20	0.19	0.19	0.20	0.19
	125mm	0.18	0.19	0.18	0.18	0.19	0.19
	150mm	0.16	0.17	0.16	0.16	0.17	0.17
0.022 (Foil faced PIR) e.g. Kingspan TW50	50mm	0.24	0.25	0.24	0.23	0.26	0.24
	75mm	0.19	0.20	0.19	0.18	0.20	0.19
	100mm	0.16	0.16	0.15	0.15	0.16	0.16
	125mm	0.15	0.16	0.15	0.15	0.16	0.15
	140mm	0.14	0.14	0.14	0.14	0.15	0.14
0.018 (Foil faced phenolic) e.g. Kingspan K108	50mm	0.21	0.22	0.21	0.21	0.23	0.22
	75mm	0.17	0.17	0.16	0.16	0.17	0.17
	100mm	0.13	0.14	0.13	0.13	0.14	0.14

Above figures are for plasterboard on dabs internal finishes, other finishes will be similar, consult Technical Services for specific values

Wall U-Values - Solid wall, Internal insulation + Render external finish

TSD 04-03

U-value calculations in accordance with BS EN ISO 6946 and BRE Conventions for U-value Calculations, BR443



		Solar (2.9N/mm ²)	Standard (3.6N/mm ²)	High or Super Strength (7.3 or 8.7N/mm ²)
		215mm	215mm	215mm
Internal insulation	Board thickness (mm)	U-Value (W/m²K)		
Gyproc Thermaline Super insulated plasterboard	50 (R = 1.97W/m ² K)	0.27	0.29	0.31
	60 (R = 2.56W/m ² K)	0.23	0.25	0.26
	70 (R = 3.06W/m ² K)	0.21	0.22	0.23
	80 (R = 3.56W/m ² K)	0.19	0.20	0.21
	90 (R = 4.06W/m ² K)	0.17	0.18	0.19
Kingspan K118 insulated plasterboard	82.5 (R = 3.95W/m ² K)	0.17	0.18	0.19
	87.5 (R = 4.20W/m ² K)	0.17	0.18	0.18
	92.5 (R = 4.50W/m ² K)	0.16	0.17	0.17
	102.5 (R = 5.05W/m ² K)	0.15	0.15	0.16
	112.5 (R = 5.60W/m ² K)	0.14	0.14	0.15
	122.5 (R = 6.15W/m ² K)	0.13	0.13	0.14

Other board types/thicknesses may be used provided the proposed boards thermal resistance, R, is not greater than that shown for appropriate U-value above

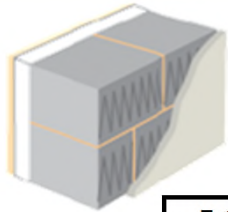
All boards assumed as fixed on dabs for calculation purposes, consult board manufacturer for fixing recommendations

Above figures are for a traditional 20mm render external finish, other finishes will be similar, consult Technical Services for specific values

Wall U-Values - Solid wall, External insulation + Render external finish

TSD 04-04

U-value calculations in accordance with BS EN ISO 6946 and BRE Conventions for U-value Calculations, BR443



External Insulation conductivity (W/mK)	Insulation thickness (mm)	Solar (2.9N/mm ²)	Standard (3.6N/mm ²)	High or Super Strength (7.3 or 8.7N/mm ²)
		215mm	215mm	215mm
		U-Value (W/m ² K)		
0.037	75	0.25	0.28	0.29
	100	0.21	0.23	0.24
	125	0.19	0.20	0.21
	150	0.17	0.18	0.18
0.032	100	0.20	0.21	0.22
	125	0.17	0.18	0.19
	150	0.15	0.16	0.16
0.022	75	0.19	0.20	0.21
	100	0.15	0.16	0.17
	125	0.13	0.14	0.14
0.018	50	0.21	0.23	0.24
	75	0.16	0.17	0.18
	100	0.13	0.14	0.14

Above figures are for a traditional 20mm render finish externally and plasterboard on dabs internal, other finishes will be similar, consult Technical Services for specific values