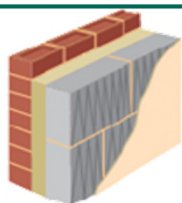


Wall U-Values - Cavity wall, brick outer leaf, full fill

TSD 04-01

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



		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
Cavity Insulation conductivity (W/mK)	Cavity thickness (mm)	U-Value (W/m ² K)					
0.037 e.g. Dritherm Cavity Slab 37	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
	175	0.17	0.17	0.17	0.16	0.18	0.17
	200	0.16	0.16	0.16	0.16	0.17	0.16
	225	0.15	0.15	0.14	0.14	0.15	0.15
	250	0.13	0.14	0.13	0.13	0.14	0.13
0.034 e.g. Dritherm Cavity Slab 34	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
	175	0.16	0.16	0.16	0.15	0.16	0.16
	200	0.15	0.15	0.15	0.15	0.16	0.15
	225	0.14	0.14	0.14	0.13	0.14	0.14
	250	0.12	0.13	0.12	0.12	0.13	0.13
0.032 e.g. Dritherm Cavity Slab 32	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
	175	0.15	0.15	0.15	0.15	0.16	0.15
	200	0.14	0.15	0.14	0.14	0.15	0.14
	225	0.13	0.13	0.13	0.13	0.13	0.13
	250	0.12	0.12	0.12	0.12	0.12	0.12
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
0.019 e.g. Kooltherm K106	100 *	0.16	0.17	0.16	0.16	0.17	0.17
	125 *	0.13	0.14	0.13	0.13	0.14	0.14
	150 *	0.11	0.12	0.11	0.11	0.12	0.12

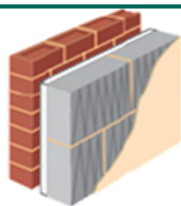
* Includes insulation + 10mm design gap

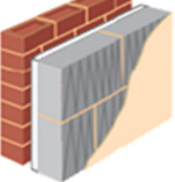
Above figures are for plasterboard on dabs internal finishes, other finishes will be similar, consult Technical Services for specific values
Insulation products named correct at time of issue. All thicknesses shown may not be available for each product but have been included for comparison purposes.

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



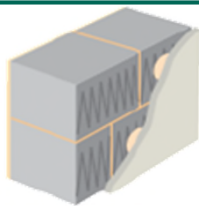
		Solar (2.9N/mm ²)	Standard (3.6N/mm ²)			High or Super Strength (7.3 or 8.7N/mm ²)	
		100mm	100mm	140mm	150mm	100mm	140mm
Cavity Insulation conductivity (W/mK)	Insulation thickness (mm)	U-Value (W/m ² K)					
0.030 (Foil faced, grey EPS) e.g. Alreflex Platinum	50	0.28	0.30	0.28	0.27	0.30	0.29
	75	0.23	0.24	0.23	0.22	0.24	0.23
	100	0.19	0.20	0.19	0.19	0.20	0.19
	125	0.17	0.17	0.16	0.16	0.17	0.17
	150	0.15	0.16	0.15	0.15	0.16	0.15
	175	0.14	0.14	0.14	0.13	0.14	0.14
	200	0.12	0.13	0.12	0.12	0.13	0.12
0.022 (Foil faced PIR) e.g. Kingspan TW50	50	0.24	0.25	0.24	0.23	0.26	0.24
	75	0.19	0.20	0.19	0.18	0.20	0.19
	100	0.16	0.16	0.15	0.15	0.16	0.16
	125	0.13	0.14	0.13	0.13	0.14	0.13
	150	0.12	0.13	0.12	0.12	0.13	0.12
	175	0.11	0.11	0.11	0.11	0.11	0.11
	200	0.10	0.10	0.10	0.10	0.10	0.10
0.019 (Foil faced phenolic) e.g. Kingspan K108	50	0.22	0.23	0.22	0.22	0.23	0.22
	75	0.17	0.18	0.17	0.17	0.18	0.17
	100	0.14	0.14	0.14	0.14	0.14	0.14
	125	0.12	0.12	0.12	0.12	0.12	0.12
	150	0.11	0.11	0.11	0.11	0.11	0.11

Above figures are for plasterboard on dabs internal finishes, other finishes will be similar, consult Technical Services for specific values
Insulation products named correct at time of issue. All thicknesses shown may not be available for each product but have been included for comparison purposes.

Wall U-Values - Solid wall, internal insulation

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) 215mm	Standard (3.6N/mm ²) 215mm	High or Super Strength (7.3 or 8.7N/mm ²) 215mm
Internal Insulation	Board thickness (mm)	U-Value (W/m ² K)		
Gyproc Thermaline PIR insulated plasterboard	53 (R = 1.85W/m ² K)	0.28	0.30	0.33
	63 (R = 2.30W/m ² K)	0.25	0.27	0.28
	78 (R = 3.00W/m ² K)	0.21	0.22	0.24
	93 (R = 3.65W/m ² K)	0.18	0.20	0.21
Kingspan K118 insulated plasterboard	82.5 (R = 3.65W/m ² K)	0.18	0.20	0.21
	92.5 (R = 4.20W/m ² K)	0.17	0.18	0.18

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

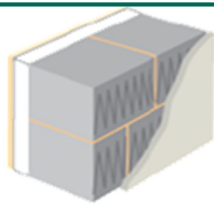
Details of boards named correct at time of issue. All thicknesses shown may not be available for each product but have been included for comparison purposes

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

Wall U-Values - Solid wall, external insulation

TSD 04-04

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



		Solar (2.9N/mm ²) 215mm	Standard (3.6N/mm ²) 215mm	High or Super Strength (7.3 or 8.7N/mm ²) 215mm
External Insulation conductivity (W/mK)	Insulation thickness (mm)	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
	175	0.15	0.16	0.16
0.032	100	0.20	0.21	0.22
	125	0.17	0.18	0.19
	150	0.15	0.16	0.16
	175	0.13	0.14	0.15
0.022	75	0.19	0.20	0.21
	100	0.15	0.16	0.17
	125	0.13	0.14	0.14
0.019	50	0.22	0.24	0.25
	75	0.17	0.18	0.19
	100	0.14	0.15	0.15

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