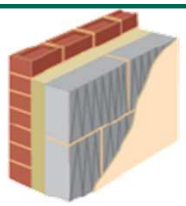
Wall U-Values - Thin joint cavity wall, brick outer leaf, full fill

TSD 04-01 TJ

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

PARTNERS IN WALL BUILDING



Block Formats:
630mm x 215mm Plus or
630mm x 250mm Jumbo

		Solar (2.9N/mm²)	Standard (3.6N/mm²)			High or Super Strength (7.3 or 8.7N/mm²)	
		100mm	100mm	140mm	150mm	100mm	140mm
Cavity Insulation conductivity (W/mK)	**Cavity thickness (mm)**	**U-Value (W/m²K)**					
0.037 e.g. Dritherm 37 Standard	100	0.25	0.26	0.24	0.24	0.27	0.25
	125	0.21	0.22	0.21	0.21	0.23	0.22
	150	0.18	0.19	0.18	0.18	0.20	0.19
	175	0.16	0.17	0.16	0.16	0.17	0.17
	200	0.15	0.15	0.15	0.15	0.16	0.15
	225	0.14	0.15	0.14	0.14	0.15	0.14
	250	0.13	0.13	0.13	0.13	0.14	0.13
0.034 e.g. Dritherm 34 Super	100	0.23	0.25	0.23	0.23	0.25	0.24
	125	0.20	0.21	0.20	0.20	0.21	0.20
	150	0.17	0.18	0.17	0.17	0.18	0.18
	175	0.15	0.16	0.15	0.15	0.16	0.16
	200	0.14	0.14	0.14	0.14	0.14	0.14
	225	0.13	0.14	0.13	0.13	0.14	0.14
	250	0.12	0.13	0.12	0.12	0.13	0.12
0.032 e.g. Dritherm 32 Ultimate	100	0.22	0.24	0.22	0.22	0.24	0.23
	125	0.19	0.20	0.19	0.19	0.20	0.19
	150	0.17	0.17	0.16	0.16	0.18	0.17
	175	0.15	0.15	0.15	0.14	0.15	0.15
	200	0.13	0.14	0.13	0.13	0.14	0.13
	225	0.13	0.14	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 *	0.17	0.18	0.17	0.17	0.18	0.18
	125 *	0.14	0.15	0.14	0.14	0.15	0.15
	150 *	0.12	0.13	0.12	0.12	0.13	0.13
0.018 e.g. Kooltherm K106	100 *	0.15	0.16	0.15	0.15	0.16	0.16
	125 *	0.13	0.13	0.13	0.13	0.13	0.13
	150 *	0.11	0.11	0.11	0.11	0.11	0.11

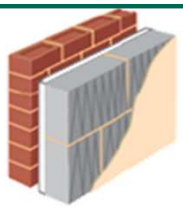
* Includes insulation + 10mm design gap

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 - Thin joint cavity wall, brick outer leaf, partial fill

TSD 04-02 TJ

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



Block Formats:
630mm x 215mm Plus or
630mm x 250mm Jumbo

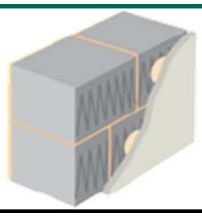
Cavity Insulation conductivity (W/mK)	Insulation thickness (mm)	Solar (2.9N/mm²)	Standard (3.6N/mm²)			High or Super Strength (7.3 or 8.7N/mm²)	
		100mm	100mm	140mm	150mm	100mm	140mm
		U-Value (W/m²K)					
0.030 (Foil faced, grey EPS) e.g. Alreflex Platinum	50	0.27	0.28	0.27	0.26	0.29	0.28
	75	0.22	0.23	0.22	0.21	0.24	0.22
	100	0.19	0.19	0.18	0.18	0.20	0.19
	125	0.16	0.17	0.16	0.16	0.17	0.16
	150	0.14	0.15	0.14	0.14	0.15	0.14
	175	0.13	0.14	0.13	0.13	0.14	0.14
	200	0.12	0.12	0.12	0.12	0.13	0.12
0.022 (Foil faced PIR) e.g. Kingspan TW50	50	0.23	0.25	0.23	0.23	0.25	0.24
	75	0.18	0.19	0.18	0.18	0.20	0.19
	100	0.15	0.16	0.15	0.15	0.16	0.15
	125	0.13	0.13	0.13	0.13	0.14	0.13
	150	0.11	0.12	0.11	0.11	0.12	0.11
	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
0.018 (Foil faced phenolic) e.g. Kingspan K108	50	0.21	0.22	0.21	0.20	0.22	0.21
	75	0.16	0.17	0.16	0.16	0.17	0.16
	100	0.13	0.14	0.13	0.13	0.14	0.13
	125	0.11	0.11	0.11	0.11	0.12	0.11
	150	0.10	0.10	0.10	0.10	0.10	0.10

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 - Thin joint solid wall, internal insulation

TSD 04-03 TJ

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



Block Formats:

630mm x 215mm Plus

Internal Insulation	Board thickness (mm)	U-Value (W/m²K)		
		Solar (2.9N/mm²) **215mm**	**Standard** (3.6N/mm²) **215mm**	**High or Super Strength** (7.3 or 8.7N/mm²) **215mm**
Gyproc Thermaline Super insulated plasterboard	50 (R = 1.97W/m²K)	0.25	0.28	0.30
	60 (R = 2.56W/m²K)	0.22	0.24	0.26
	70 (R = 3.06W/m²K)	0.20	0.21	0.23
	80 (R = 3.56W/m²K)	0.18	0.19	0.20
	90 (R = 4.06W/m²K)	0.16	0.18	0.19
Kingspan K118 insulated plasterboard	82.5 (R = 3.95W/m²K)	0.17	0.18	0.19
	87.5 (R = 4.20W/m²K)	0.16	0.17	0.18
	92.5 (R = 4.50W/m²K)	0.15	0.16	0.17
	102.5 (R = 5.05W/m²K)	0.14	0.15	0.16
	112.5 (R = 5.60W/m²K)	0.13	0.14	0.14
	122.5 (R = 6.15W/m²K)	0.12	0.13	0.13

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

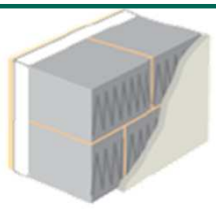
Details of boards named correct at time of issue. All thicknesses shown may not be available for each product but have been included for comparison purposes

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

Wall U-Values - Thin joint solid wall, external insulation

TSD 04-04 TJ

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



Block Formats:

630mm x 215mm Plus

External Insulation conductivity (W/mK)	Insulation thickness (mm)	Solar (2.9N/mm²) 215mm	Standard (3.6N/mm²) 215mm	High or Super Strength (7.3 or 8.7N/mm²) 215mm
		U-Value (W/m²K)		
0.037	75	0.23	0.26	0.28
	100	0.20	0.22	0.24
	125	0.18	0.19	0.20
	150	0.16	0.17	0.18
	175	0.14	0.15	0.16
0.032	100	0.19	0.20	0.21
	125	0.16	0.18	0.18
	150	0.14	0.15	0.16
	175	0.13	0.14	0.14
0.022	75	0.18	0.19	0.20
	100	0.15	0.16	0.16
	125	0.13	0.13	0.14
0.018	50	0.20	0.22	0.23
	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