



LINCS BUILDING  
CONSULTANCY

## **Guidance Note No. 54**

Quick Guide to  
Approved Document  
L1B – U and  
Conductivity Values for  
Materials

**LBC Technical Note**  
**Compliance with revised AD L1B 2006 Small Domestic Works**

**Examples of Ground Floor Insulation**

**Suspended Timber** Ground Floor U-Value achieved min 0.22W/m<sup>2</sup>K

Required thickness of insulation/mm										
Product	K value	Perimeter/Area Ratio								
		1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2
Kingspan Kooltherm K3	0.021- 0.024	110	110	110	105	105	100	95	85	70
Celotex GA3000Z	0.023	120	115	110	110	105	100	95	85	70
Kingspan Thermafloor TF70	0.022- 0.024	120	115	115	110	110	105	100	90	70
Dow Floormate 200x	0.029	130	120	120	120	120	110	110	100	80
Jablite Jablo	0.030	125	120	120	115	110	105	95	80	55
Rockwool Flexi	0.038	150	140	140	140	140	140	140	120	90
Jablite Jabfloor 70	0.038	145	145	140	135	130	125	115	95	90
Crown Loft Roll	0.044	250	250	250	250	200	200	200	170	150

**Floating Floor** U value achieved min 0.22 W/m<sup>2</sup>K

Required thickness of insulation/mm										
Product	K value	Perimeter/Area Ratio								
		1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2
Kingspan* Kooltherm K3	0.021- 0.024	100	95	95	90	85	80	70	60	40
Celotex GA3000Z	0.023	105	100	100	95	90	85	75	65	40
Kingspan* Thermafloor TF70	0.022- 0.024	105	100	100	95	90	85	75	65	40
Kingspan Thermafloor TF73	0.029	NM	NM	NM	NM	NM	98	93	79	58

Note These are calculated figures and should be adjusted to the nearest manufactures thickness  
 NM Not manufactured  
 \* Laid between battens at 600ctrs

**Suspended Beam & Block Floor** U value achieved min 0.22 W/m<sup>2</sup>K

Required thickness of insulation/mm										
Product	K value	Perimeter/Area Ratio								
		1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2
Kingspan Kooltherm K3	0.021- 0.024	75	70	70	70	70	65	60	55	45
Celotex GA3000Z	0.023	80	80	80	75	75	75	70	65	50
Kingspan Thermafloor TF70	0.022- 0.024	80	80	80	75	75	70	65	60	50
Dow Floormate 200x	0.029	110	110	110	110	110	100	90	90	70
Polyfoam Floorboard	0.029	110	110	110	110	100	100	100	85	75
Jablite Jablo	0.030	125	120	120	115	110	105	95	80	55
Rockwool Flexi	0.038	150	140	140	140	140	140	140	120	90
Jablite Jabfloor 70	0.038	145	145	140	135	130	125	115	95	90
Crown Loft Roll	0.044	250	250	250	250	200	200	200	170	150

## Ground Bearing Slab U value achieved min 0.22 W/m<sup>2</sup>K

Required thickness of insulation/mm										
Product	K value	Perimeter/Area Ratio								
		1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2
Kingspan Kooltherm K3	0.021-0.024	75	70	70	70	70	65	60	55	45
Celotex GA3000Z	0.023	80	80	80	75	75	75	70	65	50
Kingspan Thermafloor TF70	0.022-0.024	80	80	80	75	75	70	65	60	50
Dow Floormate 200x	0.029	110	110	110	110	110	100	90	90	70
Polyfoam Floorboard	0.029	110	110	110	110	100	100	100	85	75
Jablite Jablo	0.030	95	90	90	90	85	80	75	65	45
Rockwool Flexi	0.038	130	130	125	125	120	115	110	100	80
Jablite Jabfloor 70	0.038	120	115	115	110	105	100	95	80	55

## Cavity Wall – Timber Frame 150 100x50 studs at 600 & 400 centres U value achieved min 0.30 W/m<sup>2</sup>K

Outer leaf		Cavity		Inner leaf		Internal finish	
mm		mm		mm		mm	
105	Brick	50	Clear cavity	140	Crown Frametherm roll35/38 or Crown Frametherm slab 35/38 in studs @ 600ctrs	12.5	Plasterboard
105	Brick	50	Clear cavity	100	Fibreglass	35	Thermaline plus
105	Brick	50	Clear cavity	100	90mm Isowool HP batt	28	Thermaline platinum
105	Brick	50	Clear cavity	80	Kingspan Thermawall TW55 between studs	12.5	Plasterboard
105	Brick	50	Clear cavity	70	Kingspan Kooltherm K12 Framing board between studs	12.5	Plasterboard
105	Brick	50	Clear cavity	40	Kingspan Kooltherm K12 Framing board between studs	32.5	Kooltherm K18 insulated dry lining board
105	Brick	50	Clear cavity	40	Kingspan Thermawall TW55 between studs	32.5	Kooltherm K18 insulated dry lining board
105	Brick	50	Clear cavity	90	Isowool timber frame HP batt	28	Thermaline plus
105	Brick	50	Clear cavity	100	Celotex xr3000 between studs	12.5	Plasterboard & skim

## Timber Frame Wall U value achieved min 0.30 W/m<sup>2</sup>K

External finish	100 x 50 stud wall		Internal Finish	
	mm		mm	
Tiles & battens	75	Kingspan Thermawall TW55	22	Gyproc Thermaline Basic
Tiles & battens	100	Fibreglass	35	Gyproc Thermaline Plus
Tiles & battens (or 12.5 Fireline board if protected from elements)	75	Celotex Tuff-R GA 3075	25	12mm Celotex T-Break 3012 & 12.5 plasterboard
Tiles & battens	70	Kingspan Kooltherm K12 Framing	22	Gyproc Thermaline Basic

### Dry Lining to Existing Solid Wall U Value achieved min 0.30 W/m<sup>2</sup>K

Existing Wall		Dry lining product		Internal Finish	
mm		mm		mm	
215	Brick	67.5	Kingspan Kooltherm K18 insulated dry lining board	5	Skim coat
215	Brick	50	Celotex tuff-R Ga3000 with taped joints against brickwork & 25 x 50 battens @600ctrs fixed through insulation to walls with 12.5 gyproc wallboard int finish	12.5	Plasterboard
103	Brick	50	Celotex tuff-R Ga3000 with taped joints against brickwork & 25 x 50 battens @600ctrs fixed through insulation to walls with 12.5 gyproc wallboard int finish	12.5	Plasterboard

### Partial Fill Cavity Wall- Block inner leaf U Value achieved min 0.30 W/m<sup>2</sup>K

Outer leaf		Partial Fill		Inner leaf		Internal finish	
mm		mm		mm		mm	
105	Brick	90	40mm Kingspan Thermawall TX50 or 40mm Kingspan Kooltherm K8	100	Block K value 0.11 or lower eg Durox supabloc	13	Dense Plaster
105	Brick	85	35 Thermawall TW50 or 35 Kooltherm K8 or 35 Celotex tuff-R CW3035	100	Block K value 0.11 or lower eg Thermalite Turbo	13	Dense Plaster
105	Brick	95	55 Celotex tuff-R CW3035	100	Block K value 0.19 or lower eg Durox supabloc	13	Light weight Plaster
105	Brick	50	Clear Cavity	100	Block K value 0.11 or lower eg Thermalite Turbo	60	Thermaline Super
105	Brick	50	Clear Cavity	100	Kingspan Kooltherm K12 Framing board between studs	65	Thermaline Super
105	Brick	100	50 Celotex tuff-R CW3050	105	Brick		

### Typical Solid Wall Construction U Value achieved min 0.30 W/m<sup>2</sup>K

External		Block Type		Internal Finish	
mm		mm		mm	
20	Render	215	Thermalite Turbo	40	Gyproc Thermaline Super
20	Render	215	Topblock Toplite Standard	45	Gyproc Thermaline Super
20	Render	215	Durox Supablock	40	Gyproc Thermaline Super
20	Render	215	Thermalite Turbo	42.5	Kooltherm K17 dry-lining board
20	Render	215	Topblock GTI	42.5	Kooltherm K17 dry-lining board
20	Render	215	Durox Supablock	42.5	Kooltherm K17 dry-lining board
20	Render faced with 45 polyfoam cavityboard	215	Durox Supablock	13	Dense plaster
20	Render	215	Durox Supablock	55	Thermaline Plus or Thermaline Super
20	Render	215	Durox Supablock Topblock GTI Thermalite Turbo	37.5	Koolthermaline K18 dry-lining board mechanically fixed to timber battens

## Full Fill Cavity Wall – Block Inner Leaf U Value achieved min 0.30 W/m<sup>2</sup>K

Outer leaf		Full Fill Cavity*		Inner leaf		Internal finish	
mm		mm		mm		mm	
105	Brick	100	Dritherm 32	100	Block K value 0.46 or lower eg Plasmor Stranlite	15	Light weight Plaster
105	Brick	90	Crown Dritherm	100	Block K value 0.15 or lower eg Topblock Toplite Standard	15	Plaster
105	Brick	85	Crown Dritherm	100	Block K value 0.15 or lower eg Topblock Toplite Standard	12.5	Plasterboard on dabs
105	Brick	85	Dritherm 32	100	Block K value 0.27 or lower eg Plasmor Fibolite	15	Light weight Plaster
105	Brick	75	Dritherm 32	100	Block K value 0.11 or lower eg Durox Supablock	13	Dense plaster
105	Brick	50	Crown Dritherm	100	Block K value 0.34 or lower eg Plasmor Aglite	45 or 50	Thermaline Super Thermaline platinum
105	Brick	50	Crown Dritherm	100	Block K value 1.13 or lower	60	Thermaline Platinum VC
100	Block K value 0.45 or better eg Palsmor Fibolite	85	Crown Dritherm	100	Block K value 0.27 or lower eg Plasmor Fibolite	15	Light weight Plaster
100	Block K value 0.45 or better eg Palsmor Fibolite	75	Dritherm 32	100	Block K value 0.11 or lower eg Durox Supablock	12.5	Plasterboard on dabs (note 15mm air gap)
100	Block K value 0.15 or better eg Topblock Toplite Standard	65	Crown Dritherm	100	Block K value 0.15 or lower eg Topblock Toplite Standard	12.5	Plasterboard on dabs
105	Brick	100	Dritherm 32	105	Brick		None

\*Full fill systems require cavity to be increased by 10mm in accordance with manufacturers details

## Typical Block K Values.

Block Manufacturer	Block Type	Strength N	Density kg/m <sup>3</sup>	K value W/mK
Armstrong	Lightweight			0.42
	Dense			1.13
Besblock	Insulite solid			0.34
Celcon	Standard	2.8	460	0.11
	Standard	3.5		
	Standard	4	620	0.15
Durox	Hi Strength	7	750	0.19
	Supablock 400	2.8	420	0.10
	Supablock	3.5	480	0.11
	Supablock 4	4	600	0.16
Forticrete	Supablock 7	7	650	0.17
	Lightweight			0.42-0.59
	Dense			0.93-1.13
Hanson	Ultralite			0.29
	Superlite			0.40
	Fenlite			0.48
	Evalast			1.32

Interfuse	Optilyte			0.19
	Ultrlyte			0.23
	Interyte			0.44
	Dense			1.10
Lignacite	SP			0.60
	Standard			0.69
Masterblock	Pumalite			0.44
	Lightweight			0.59
	Dense			1.06
Mona Precast	Fibotherm			0.25
	Monalite 100S			0.5
	Monacrete 100			0.59
	GPI			0.51
	Monacrete 100S			1.13
Plasmor	Fibolite	3.5	850	0.25
		7	900	0.27
	Aglite	4.2	1050	0.32
		7		0.32
		10.5		0.32
	Stranlite	4.2	1375	0.46
		7	1375	0.46
	Plascon	7	1950	1.06
		10.5	1950	1.06
	RMC	Readyblock 1100		
Readyblock 1400				0.59
Readyblock dense				1.13
Stock block	Ultralite			0.25
	Insulite			0.40
	Lyta			0.56
	Dense Concrete			0.99-1.25
Thermalite	Turbo	2.8	480	0.11
	Shield	4	550	0.15
	Hi Strength	7	730	0.19
	Hi Strength	10		0.20
Topblock	Hemelite	3.5	1360	0.45
		7	1450	0.47
		10		0.49
	Toplite GTI	2.8	480	0.11
	Toplite Standard	3.5	630	0.15
	Toplite 7	7	730	0.19
	Topcrete Fair Face			0.99
	Topcrete Dense			1.28

### Cold Deck Flat Roof insulation between & under joists

u value min 0.20 W/m<sup>2</sup>K

Product	K value	Notes	Solution o/a thickness
Jablite	0.038	Data taken from manu tech staff & based on typical timber roof with 50 wide joists at 400c/c & 12.5 plasterboard ceiling	160 between joist & 50 under
Jablo Board	0.030	Ditto	120 between & 50 under or 150 between & 30 under
Crown Frametherm batt & Polyfoam Linerboard	0.035 & 0.029	Ditto	140 batt between joists & 45.5/9.5 linerboard under
Kingspan Thermapitch	0.022-0.024	Ditto	170 between or 130 between & 20 under
Celotex GA 3000	0.023	Ditto	180 between joists
Celotex XR 3000 & Celotex GA 3000	0.023	Ditto	100 XR3000 between & 40 GA3000 under

### Vented Cold Deck Pitched Roof insulation between rafters

u value min 0.20 W/m<sup>2</sup>K

Product	K value	Solution/mm
Crown Rafter roll 32 & Polyfoam linerboard	0.035 (therm res.1.695)	130 between rafters & 45.5 linerboard under rafters
Kingspan Thermapitch	0.022-0.023	75 between rafters & 50 under rafters*
Kingspan Kooltherm K7	0.021-0.024	70 between rafters & 50 under rafters*
Celotex RXR3000 Celotex GA3000	0.023	170 between rafters (160mm where using a breathable membrane) or 100 between rafters & 40mm under rafters with plasterboard applied directly under or 50 between rafters & 65 under rafters, with plasterboard attached to 25mm deep counter battens to create air space.
Rockwool Flexi	0.038	220mm between rafters
Web Dynamics Thinsulex &	R value 1.69	1 layer thinsulex under rafters with plasterboard attached to 25mm deep counter battens to create air space &
Insulation with K value of 0.023 or better	0.023	80mm(70mm where using breathable membrane insulation such as Kingspan or celotex between rafters*

\*Where rafters are only 100mmdeep, battens should be provided to their underside to maintain 50mm air gap above insulation as necessary.

### Warm Deck Flat Roof insulation above and between joists

u value min 0.20 W/m<sup>2</sup>K

Product	K value	Notes	Solution o/a thickness
Celotex tempcheck Deck (composite decking)	0.023	Data taken from manu tech staff & based on typical timber roof with 50 wide joists at 400c/c & 12.5 plasterboard ceiling	105(TD3105) for built up roofing & 115 (TD3115) for single ply membranes
Celotex Extra-R XR3000	0.023		Ditto 100
Knauf Krimpack rock fibre slab			175
Polyfoam Roofboard Standard ( for single ply membranes only)	0.029		Ditto 170 between or 130 between & 20 under
Jablite Jabdec	0.036		Ditto 183 with mech fixing 163 without
Kingspan Therमारoof TR31 (composite deck)	0.022-0.024	Taped joints in under layer for vapour check	Ditto 96 plus 25 Kingspan TP10 between joists & directly under

### Warm Deck Pitched Roof Insulation above rafters u value min 0.20 W/m<sup>2</sup>K

Product	K value	Solution/mm
Kingspan	0.022-0.023	100 over rafters
Celotex GA3000	0.023	100 over rafters
Celotex GA	0.023	60 over & 50 between
Jabroof Panel	0.038	190 over rafters

### Vented Cold Deck Pitched Roof insulation between & over ceiling joists

u value min 0.16 W/m<sup>2</sup>K

Product	K value	Solution/mm
Crown wool	0.044	100mm between & 170 over
Rockwool Roll	0.044	100mm between & 170 over
Crown wool &	0.044	100mm Crown wool between &
Polyfoam Supadeck	0.029	130mm supadeck over
Kingspan Thermapitch	0.022-0.023	100 between & 50 over

## Typical Dry Lining Boards Thermal Resistance

Manufacturer	Product	Total R value	Thickness
Owens Corning Polyfoam	Liner Board Extruded polystyrene & 9.5mm plasterboard	0.81	27
		1.035	34.5
		1.185	39.5
		1.335	44.5
		1.560	52
		1.695	56.5
Owens Corning Polyfoam Plus	Liner Board Extruded polystyrene & 9.5mm plasterboard	1.837	47.5
		1.467	37.5
		1.097	27.5
British Gypsum Gyproc	Thermaline REVEAL phenolic foam & wallboard	0.60	18
	Thermaline Basic Low density expanded polystyrene & wallboard	0.36	22
		0.55	30
		0.80	40
		1.05	50
	Thermaline PLATINUM High density expanded polystyrene & wallboard	0.59	28
		0.97	40
		1.38	50
		1.73	60
	Thermaline PLUS expanded polystyrene & wallboard	0.68	27
		0.94	35
		1.12	40
		1.30	45
		1.57	50
		1.73	55
	Thermaline SUPER phenolic foam, vapour layer & wallboard	1.16	30
		1.72	40
		1.99	45
		2.27	50
	Tri-line mineral wool & wool board	0.70	32
		1.01	42
		1.32	52
Kingspan	Thermawall TW52 rigid urethane & 12.5 plasterboard	0.80	32.5
		0.95	37.5
		1.15	42.5
		1.35	47.5
		1.55	52.5
		1.70	57.5
		1.90	62.5
		2.10	67.5
		2.25	72.5
		2.45	77.5
		2.65	82.5
		2.80	87.5
		3.10	92.5
		3.30	97.5
Kingspan	Thermawall TW56 rigid urethane & 12.5 plasterboard	0.95	32.5
		1.20	37.5
		1.40	42.5
		1.55	47.5
		1.80	52.5
		2.00	57.5
		2.20	62.5
		2.45	67.5
		2.65	72.5
		2.85	77.5
		3.10	82.5



## Typical Insulation K Values

Company	Product	K value	Thickness	Use
Owens Corning Crown	Dritherm	0.035	50	Cavity wall
		0.036	65	
		0.037	75,85 &100	
	Dritherm 32	0.032		Cavity wall
	Dritherm Plus	0.036	75,85 & 100	Cavity wall
	Framtherm 35	0.035	90 &140	Timber frame inter rafter
	Frantherm 40	0.040	90 &140	Timber frame inter rafter
	Frantherm 44	0.044	90 &140	Timber frame inter rafter
Owens Corning Polyfoam	Universal Slab	0.035	100	Walls roof & floors
	Wool/loft roll	0.044	100,150,170,200	Walls,roofs,floors
	Cavity Board	0.29	25,30,35,40,50,60	Cavity wall
	Roofboard standard	0.029 0.034	35,50,60,75 90	Warm deck roof
	Floorboard standard	0.029	25,35,50,65,75	Floors
Celotex	Supadeck	0.029	113 polyfoam insulation & 18 ply decking	Loft decking
	Raftersqueeze	0.030	50,75	Inter rafter
	Tuff-R CW2000	0.019	17,20,25,30,33,36,40,44,48	Cavity wall
	Tempchek deck 5.5 ply & insulation	0.019	75.5	Warm deck flat roof
	Double-R GA 3000Z	0.023	12,20,25,30,35,40,45,50,55,60,65,70,75,80,90	Flat/pitch,floor,wall
Rockwool	Flexi	0.038		
	Timber batt/roll	0.037	60,80,90,100,150	Timber frame, inter rafter,timber floor
	Cavity wall batt	0.036	50,65,75,100,125,150	Cavity wall
	Rockfloor	0.036	30,40,50,60,70	Concrete floor
	Roll batts	0.037	80,100,150	Pitched roof,floor
Jablite	Jablo	0.030		
	Jabfloor 70	0.038	25,40,50,60,75,100,120	floor
	Jabwall, Jablok	0.038	40,50,60,75	Cavity wall
	Jabfil	0.038	75,100	Cavity wall
	Board	0.038	25,40,50,60,75,100	Wall lining, inter rafter
	Jabroof panel	0.036	65,95,145,190	Inter rafter
	Jabsqueeze	0.038	80,105,145	Loft conversions
	Jabroof board	0.036	From 20 in 5mm increments	Warmdeck flat roof
	Jabdec	0.036	From 33 in 5mm increments	Warmdeck flat roof
	Jabtherm	0.036	From 20 in 5mm increments	Warmdeck flat roof
Kingspan	Kooltherm K7	0.022-0.024	25-70 in 5mm increments	Inter/over rafters
	Thermapitch TP 10	0.022-0.023	20-200 in 5mm increments	Inter/over rafters
	Therमारooft TR26	0.022-0.023	45-130 in 5mm increments	Inter/over rafters
	Kooltherm K2 & K5	0.022-0.024	30-70 in 5mm increments	Warmdeck flat roof
	Kooltherm K8	0.022-0.024	20-50 in 5mm increments	Warmdeck flat roof
	Thermawall TW51	0.025	25-50 in 5mm increments	Cavity wall
	Thermawall TW50	0.022-0.023	20-65 in 5mm increments	Cavity wall
	Thermawall TW55	0.022-0.023	20-100 in 5mm increments	Timber frame
	Kooltherm K12	0.022-0.024	20-105 in 5mm increments	Timber frame
	Kooltherm K3	0.022-0.024	20-115 in 5mm increments	floors
Thermafloor TF70	0.022-0.023	20-120 in 5mm increments	floors	

	Thermarroof TR20	0.026 0.025 0.024	45,50,60,70,75 80,85,90,95,100,105,110 120,125,130,135,140	Warmdeck flat roof
	Thermarroof TR31 composite board of 6 ply & insulation	0.022-0.023	51,56,61,66,71,76,81,86,91,96,101,106,111,116,126,131 136,146,156,161,166	Warmdeck flat roof
	Thermarroof TR29	0.026 0.025 0.024	50,55,60,65,70,75 85,90,95,100,105,110 125,135,140,145,150	Warmdeck flat roof
	Thermarroof TR73 composite board of 18 chipboard & insulation	0.029	20-130 in 5mm increments	floor
Dow Styrofoam	Floormate 200-X	0.029	25,35,50,60,70,80,100,120	floor
	Roofmate SL-X & LG-X	0.029 0.031	25,35,50,60,70,80,100,120 130,140,150	Flat roof
	Roofmate RL-X	0.029	25,35,50,60,70,80,100,120	Warmdeck flat roof
	Roofmate PR-X RL-X	0.029	25,35,50,60,70,80,100,120	Warmdeck pitch roof
	Styrofoam IB-X	0.029	25,35,50,60,70,80,100,120	Wall lining
	Wallmate CW-X	0.029	25,35,50,60,70,80,100,120	Cavity wall
Web Dynamics	Thinsulex (multifoil)	R value 1.69 U value 0.53	30	Loft conversion pitched roof

## Indicative u values for Windows

### Note

The window/fully glazed door energy rating should be Band B or better, or alternatively, the window should have a u value of 1.8W/m<sup>2</sup>K or better.

Doors with more than 50% of their internal surface area glazed should have overall u value of 2.28W/m<sup>2</sup>K or better.

When available, manufacturers certificate u values should be used in preference to the data in these tables.

Windows, Rooflights and Door area provision in extensions to dwellings should not exceed 25% of the floor area of the extension plus the area of any windows/doors that, as a result of the extension works no longer exist or are exposed.

## Indicative u values for Windows

u value of 1.8W/m<sup>2</sup>K

	Type of frame					
	Window with wood/Upvc frame			Window with metal frame with 4mm		
	6mm	12mm	16mm	6mm	12mm	16mm
Double glazing (low-E $\epsilon^n = 0.05$ , Air filled)	-	-	1.8	-	-	-
Double glazing (low-E $\epsilon^n = 0.1$ , Argon filled)	-	-	1.8	-	-	-
Double glazing (low-E $\epsilon^n = 0.05$ , Argon filled)	-	1.8	1.7	-	-	-
Triple glazing (low-E $\epsilon^n = 0.2$ , Air filled)	-	1.7	1.6	-	-	-
Triple glazing (low-E $\epsilon^n = 0.15$ , Air filled)	-	1.7	1.6	-	-	-
Triple glazing (low-E $\epsilon^n = 0.1$ , Air filled)	-	1.6	1.5	-	-	-
Triple glazing (low-E $\epsilon^n = 0.05$ , Air filled)	-	1.5	1.4	-	-	1.8
Triple glazing (low-E $\epsilon^n = 0.2$ , Air filled)	-	1.6	1.5	-	-	-
Triple glazing (low-E $\epsilon^n = 0.15$ , Argon filled)	1.8	1.5	1.4	-	-	1.8
Triple glazing (low-E $\epsilon^n = 0.1$ , Argon filled)	1.8	1.5	1.4	-	-	1.8
Triple glazing (low-E $\epsilon^n = 0.05$ , Argon filled)	1.7	1.4	1.3	-	1.8	1.7

Also see following tables for necessary adjustments to these indicative u values

The following adjustments should be made to these u values:

	<b>Adjustment to u value</b>	
<b>Metal Frames</b>	<b>Window</b>	<b>Rooflight</b>
No thermal break	+0.3	+0.7
Thermal break 4mm	0	+0.3
Thermal break 8mm	-0.1	+0.2
Thermal break 12mm	-0.2	+0.1
Thermal break 20mm	-0.3	0
Thermal break 32mm	-0.4	-0.1

	<b>Adjustment to u value</b>
<b>Wood or Upvc Frames</b>	<b>Rooflight</b>
Double glazed	+0.2
Triple glazes	+0.2

#### INDICATIVE U VALUE FOR GLAZED/PARTIALLY GLAZED DOORS

Where doors are fully glazed the table for the indicative u values for windows roof lights should be used. Where the door is half glazed (approximately) the u value of the door is the average of the appropriate window u value and that of the non glazed part of the door.

e.g. a solid wooden door (u value of  $3.0\text{W/m}^2\text{K}$ ) half glazed with double glazing (low-E, hard coat, argon filled, 6mm air gap, u value  $2.5\text{W/m}^2\text{K}$ ) has a resultant u-value of  $2.75\text{W/m}^2\text{K}$  ( $0.5 \times (3.0 + 2.5)$ ).



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If you would like to receive this information in another language or in another format, such as large print, Braille or on an audio tape, please contact Administration at either of the offices shown above.

Please note that these guidance notes are for advice only and may not cover all situations. It is your responsibility to ensure that they are appropriate for use in your particular circumstances.