STATUTORY INSTRUMENTS

1978 No. 723

BUILDING AND BUILDINGS

The Building (First Amendment) Regulations 1978

Made - - - -	*17th May 1978*
Laid before Parliament	*1st June 1978*
Coming into Operation	*1st June 1979*

The Secretary of State for the Environment, in exercise of the powers conferred—

(*a*) (i) by sections 61 and 62 of the Public Health Act 1936 (**a**) (as substituted by section 61(1) of the Health and Safety at Work etc. Act 1974(b)); and

(ii) by section 4(2) and 4(5) of the Public Health Act 1961 (**c**) (section 4(2) as amended by section 61(3) of, and paragraph 4 of Part I of Schedule 6 to, the Health and Safety at Work etc. Act 1974);

and now vested in him (**d**); and

(*b*) by section 61(2) of, and Schedule 5 to, the Health and Safety at Work etc. Act 1974,

and of all other powers enabling him in that behalf, after consultation with the Building Regulations Advisory Committee and such other bodies as appear to him to be representative of the interests concerned as required by section 9(3) of the Public Health Act 1961 (as amended by section 61(3) of, and paragraph 8 of Part I of Schedule 6 to, the Health and Safety at Work etc. Act 1974), hereby makes the following regulations for the purposes specified in section 61(2)(*b*) of the Public Health Act 1936, that is to say, for furthering the conservation of fuel and power—

Title and commencement

1. These regulations may be cited as the Building (First Amendment) Regulations 1978 and shall come into operation on 1st June 1979.

Application

2.—(1) The provisions of the Part and schedule inserted by regulations 10 and 13 shall not apply to Inner London.

(a) 1936 c. 49.
(b) 1974 c. 37.
(c) 1961 c. 64.
(d) S.I. 1970/1681.

(2) In this regulation "Inner London" means the area comprising the Inner London boroughs. the City of London, and the Inner Temple and the Middle Temple.

Interpretation

3.—(1) In these regulations, unless the context otherwise requires—

(*a*) "the principal regulations" means the Building Regulations 1976(**a**) and other words and expressions have the same meaning as in the principal regulations; and

(*b*) any reference to a Part. regulation or schedule shall be construed as a reference to a Part or regulation of, or a schedule to, the principal regulations.

(2) The Interpretation Act 1889 (**b**) shall apply for the interpretation of these regulations as it applies for the interpretation of an Act of Parliament.

Transitional provisions

4.—(1) These regulations shall not apply to—

(*a*) plans deposited in accordance with building regulations before 1st June 1979;

(*b*) work carried out in accordance with such plans with or without any departure or deviation from those plans; or

(*c*) work completed before that date.

(2) In this regulation, "work" means the erection of a building, the alteration or extension of a building, the execution of works, the installation of a fitting or the making of a material change of use.

Amendment of the principal regulations

5. The principal regulations shall be amended as provided in these regulations.

6. In regulation A7 (Application to alterations and extensions) there shall be substituted for the reference "regulation A5" the references "regulations A5 and FF1(2) and (3)".

7. In paragraph (1) of regulation A9 (Application to material change of use) the words "Part F (Thermal insulation)" in the list of provisions applicable under Case D shall be omitted.

8. In the list of regulations specified in paragraph (1) of regulation A13 (Exercise of power of dispensation or relaxation)—

(*a*) for the words "Part F (Thermal insulation)" there shall be substituted the words "Part F (Thermal insulation of dwellings)"; and

(*b*) after the said reference to Part F, there shall be inserted the words "Part FF (Conservation of fuel and power in buildings other than dwellings)".

(**a**) S.I. 1976/1676. (**b**) 1889 c. 63.

9. In Part F there shall be substituted for the heading "Thermal insulation" the heading "Thermal insulation of dwellings".

10. After Part F (Thermal insulation of dwellings) there shall be inserted the Part set out in Schedule 1 to these regulations.

11. In Rule E of Schedule 3 there shall be inserted after Item 6 the following item:

"6A. Calculations for the purposes of regulation F3(1), F3(2), FF3 or FF4 other than calculations to determine the U value of any part of a wall, floor or roof which is constructed in accordance with the provisions of regulation F4(1) or FF4(b)(iii).".

12. In Schedule 11 there shall be substituted for the heading "Thermal insulation" the heading "Thermal insulation of dwellings".

13. After Schedule 11 there shall be inserted the schedule set out in Schedule 2 to these regulations.

SCHEDULE 1 – Regulation 10

Part to be inserted after Part F (Thermal insulation of dwellings) of the Principal Regulations

PART FF

Conservation of fuel and power in buildings other than dwellings

FF1 Application of Part FF

(1) Subject to paragraphs (2) and (3), this Part shall apply to any building, or part of a building, falling wholly within purpose group II, III, IV, V, VI, VII or VIII other than–

(a) any building, or part, of purpose group III to which Part F applies;

(b) any building which has a total floor area not exceeding $30m^2$;

(c) any building, or part, of purpose group II, III, IV, V or VII and any building, or part, of purpose group VIII which is not intended to be used for storage if, in each case, the proposed use is such that the design output rating of the space heating installation therein will not need to exceed 25 W per square metre of floor area in order to maintain temperature conditions normal for that use; and

(d) any building, or part, of purpose group VI and any building, or part, of purpose group VIII which is intended to be used for storage if, in each case, the proposed use is such that the design output rating of the space heating installation therein will not need to exceed 50 W per square metre of floor area in order to maintain temperature conditions normal for that use.

(2) In relation to a structural alteration of the enclosing structure of an existing building or part of a building–

(a) regulation FF3 shall not apply if the building or part was erected before the date of coming into operation of this Part or was erected after that date but was exempted by paragraph (1) of this regulation; and

(b) in any case in which regulation FF3 applies, it shall apply as provided under both paragraphs (1)(a) and (1)(b) of regulation A7.

(3) In relation to an extension of an existing building or part of a building–

(a) regulation FF3 shall not apply if the extended building or part, treated as if it were being newly erected in its proposed form, would be exempted by paragraph (1) of this regulation; and

(b) in any case in which regulation FF3 applies, it shall apply as provided under paragraph (1)(a) only of regulation A7 irrespective of when that building or part was erected.

FF2 Interpretation of Part FF

(1) In this Part and in Schedule 11A–

PARTIALLY HEATED SPACE means any space which–

(a) is enclosed by structure which is exposed in part to the external air; and

(b) if regarded as a building, or part of a building, falling wholly within one purpose group, would not be subject to the requirements of this Part by virtue of sub-paragraph (c) or (d) of regulation FF1(1);

ROOFLIGHT OPENING means any structural opening in a roof which is provided for a hinged, sliding or fixed light irrespective of its size or function;

U VALUE means the thermal transmittance coefficient, that is to say, the rate of heat transfer calculated in watts through one square metre of a structure when the combined radiant and air temperature at each side of the structure differ by 1 °C and the sum of the internal and external surface resistances is taken to be 0.18 m^2°C/W for wall surfaces, 0.24 m^2°C/W for floor surfaces and 0.15 m^2°C/W for roof surfaces; and for the purposes of this definition–

SURFACE RESISTANCE means the reciprocal of the rate of heat transfer in watts between each square metre of surface and the surrounding air when there is a difference of temperature of 1 °C between the surface and the surrounding air;

VENTILATED SPACE means any space which–

(a) is enclosed by structure which is exposed in part to the external air; and

(b) is ventilated by means of permanent vents having an aggregate area exceeding 30% of the wall boundary area; and for the purposes of this definition–

PERMANENT VENT means an opening or duct which communicates with the external air and is designed to allow the passage of air at all times; and

WALL BOUNDARY AREA means the total superficial area of all walling, including any opening, bounding a ventilated space; and

WINDOW OPENING means any structural opening which is provided for a window irrespective of its size and function or for a hinged or sliding door or panel having a glazed area of 2 m^2 or more.

(2) In this Part and in Schedule 11A–

(a) any reference to a building, or part of a building, of a specified purpose group shall be construed as a reference to a building or part of that

purpose group determined in accordance with the provisions of regulation E2;

(b) any reference to a building, or part of a building, of purpose group VIII which is intended to be used for storage shall be construed as a reference to any such building or part which is a place for storage, deposit or parking of goods and materials (including vehicles); and

(c) any reference to a building, or part of a building, of purpose group VIII which is not intended to be used for storage shall be construed as a reference to any other premises not comprised in purpose groups I to VII.

(3) For the purposes of regulation FF4–

(a) any part of a roof which has a pitch of 70° or more shall be treated as an external wall;

(b) any floor which is so situated that its upper surface is exposed to the external air shall be treated as a roof in relation to that part of the building beneath it;

(c) any lintel, jamb or sill associated with an opening in a wall may be regarded (at the option of the person intending to erect the building) either as part of that wall or as part of that opening;

(d) the U value of any window opening or rooflight opening shall be assumed to be 5.7 W/m²°C if it is single-glazed, 2.8 W/m²°C if it is double-glazed or 2.0 W/m²°C if it is triple-glazed irrespective of whether the light transmitting material is glass or not; and

(e) any other opening in a wall or roof shall be assumed to have a U value equivalent to the average U value of the element in which it is situated.

FF3 Conservation of fuel and power

A building, or part of a building, to which this Part applies shall be so designed and constructed that the enclosing structure provides adequate resistance to the passage of heat the loss of which from the building or part would entail the consumption of fuel or power to enable temperature conditions normal for the proposed use of the building or part to be maintained.

FF4 ***Deemed-to-satisfy provisions for the conservation of fuel and power***

The requirements of regulation FF3 shall be deemed to be satisfied if–

(a) (i) the total area of window openings and the total area of rooflight openings situated in walls and roofs for which a maximum U value is specified in sub-paragraph (b)(i) do not exceed the appropriate percentage values specified in Table 1 to this regulation; or

(ii) the calculated total rate of heat loss (W/°C) through all such openings does not exceed that which would have obtained had each of those openings been single-glazed and the total areas thereof complied with sub-paragraph (a)(i);

and

(*b*) (*i*) *the U value of every part of a wall, floor or roof which is described in Table 2 to this regulation (excluding any openings therein) does not exceed the appropriate value specified in that Table; or*

(*ii*) *the calculated total rate of heat loss (W/°C) through all such walls, floors and roofs does not exceed that which would have obtained had the U value of every part of each of those elements complied with sub-paragraph (b)(i); or*

(*iii*) *each such wall, floor and roof is constructed in accordance with a specification contained in Part II or III of Schedule 11A whichever is appropriate.*

Table 1 to Regulation FF4

Maximum area of window openings and rooflight openings

Type of openings	Maximum area of window openings and rooflight openings having regard to the purpose group of the building or part of a building (expressed as a percentage of the total areas of the walls and roofs respectively for which a maximum U value is required by sub-paragraph (b)(i)) where– (a) the area of a window opening or rooflight opening is taken to be the area of the inner surface of the element fitted in that opening measured in the general plane or planes of that element; (b) the area of a wall is taken to be the area of the inner face of that wall (including window openings and all openings for doors, roller shutters or other purposes) measured between finished floor and ceiling levels and between finished surfaces of flanking walls or partitions; (c) the area of a roof is taken to be the area of the inner surface of that roof (including rooflight openings and all openings for other purposes) measured between flanking walls or partitions; and (d) in the case of a building, or part of a building, of purpose group V– (i) the area of any window opening situated in a wall enclosing the ground storey is not included in the total area of window openings; and (ii) the area of walling enclosing the ground storey is not included in the total area of the walls		
(1)	II or III (2)	IV, V or VII (3)	VI or VIII (4)
Window openings	25	35	15
Rooflight openings	20	20	20

Table 2 to Regulation FF4

Maximum U value of walls, floors and roofs

Element of building	Maximum U value of every part of element (in W/m^2 °C) having regard to the purpose group of the building or part of a building	
	II, III, IV, V or VII or (if not for storage) VIII	VI or (if for storage) VIII
(1)	(2)	(3)
1. External wall (other than any such wall enclosing a ventilated space or a partially heated space)	0.6	0.7
2. Internal wall exposed to a ventilated space		
3. Floor having its under surface exposed to the external air or to a ventilated space		
4. Roof (other than a roof over a ventilated space or a partially heated space) including— (a) any ceiling to the roof; or (b) any roof space and any ceiling below that space		

SCHEDULE 2 – Regulation 13

New Schedule to be inserted after Schedule 11 to the Principal Regulations

SCHEDULE 11A

Deemed-to-satisfy provisions

Regulation FF4(b)(iii)

Conservation of fuel and power in buildings other than dwellings

Part I: Interpretation of Schedule 11A

1. In this Schedule, THERMAL CONDUCTIVITY–

   (a) means the thermal transmission in unit time through unit area of a slab of a uniform homogeneous material of unit thickness when unit difference of temperature is established between its surfaces; and

   (b) in the case of any material containing cement, refers exclusively to the thermal conductivity of that material having a moisture content of 3% by volume.

2. In column (1) of each table in Parts II and III, any reference to an insulating material shall be construed as a reference to any one of the materials described in the Table to this rule.

Table to Rule 2: Insulating materials

Type (1)	Description (2)
A	Wood wool slab (density not exceeding 500 kg/m³)
B	Fibre building board: insulating board or bitumen impregnated insulating board Perlite granules
C	Cellular glass
D	Mineral fibre quilt or loose fill Urea formaldehyde foam cavity fill
E	Mineral fibre slab or rigid mat Expanded polystyrene insulating board
F	Polyurethane core to laminated board

3. If, in addition to the component parts described in column (1) of any table in Part II or III, the construction of a wall, floor or roof includes any one of the surface finishes described in column (1) of the Table to this rule, the minimum thickness of insulating material specified in column (5) of the relevant table in Part II or III (or, if there are no entries in that column, the minimum thickness specified in column (2) of that table) shall be taken to be reduced by the percentage in column (2) of the Table to this rule.

Table to Rule 3: Reduction of minimum thickness

Description of internal surface finish (1)	Percentage reduction (2)
1. Dense plaster	2
2. Lightweight plaster	6
3. Plasterboard on dabs, strips or battens	20
4. Insulating plasterboard on battens	30

4. If the density or thermal conductivity of a material is required to conform to a limit specified in column (3) or (4) in any table in Part II or III and the value is intermediate between two adjacent values specified in the relevant column, the appropriate minimum thickness of insulating material for the purposes of column (5) of that table (or, if there are no entries in that column, the minimum thickness specified in column (2) of that table) may, at the option of the person intending to erect the building, be determined by linear interpolation.

Part II: Specifications relating to buildings, or parts, of purpose group II, III, IV, V or VII or (if not for storage) VIII

Table 1: Walls

(1) Description of wall	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
1. Any wall not precisely specified in this Table—									
(a) of solid or composite construction containing insulating material; or				126	89	74	59	52	37
(b) of composite construction containing insulating material and enclosing an airspace not less than 20 mm wide				111	79	65	52	46	33
2. A cavity wall comprising an outer leaf of brickwork and an inner leaf either of brickwork or of solid concrete blocks or slabs, each leaf conforming to the limit in column (2); and									
(a) the cavity is completely filled by insulating material; and									
(i) the inner leaf is of brickwork; or	100			99	70	58	47	41	29
(ii) the inner leaf is of concrete blocks or slabs conforming to the limit in column (3) or (4); or	100	2300	1.63	111	79	65	52	46	33
	100	1700	0.76	105	74	62	49	43	31
	100	1400	0.51	99	70	58	47	41	29
	100	1100	0.34	91	64	54	43	38	27
	100	750	0.22	78	55	46	36	32	23
(b) the cavity is partly filled by insulating material attached to either face of the inner leaf; and									
(i) the inner leaf is of brickwork; or	100			84	59	50	40	35	25

(ii) the inner leaf is of concrete blocks or slabs conforming to the limit in column (3) or (4); or	100	2300	1.63	96	68	56	45	39	28
	100	1700	0.76	90	63	53	42	37	26
	100	1400	0.51	84	59	50	40	35	25
	100	1100	0.34	76	54	45	36	31	22
	100	750	0.22	62	44	37	29	27	18
(c) the insulating material is separated from the inner face of the inner leaf by an airspace not less than 20 mm wide; and									
(i) the inner leaf is of brickwork; or	100			69	49	41	32	28	20
(ii) the inner leaf is of concrete blocks or slabs conforming to the limit in column (3) or (4)	100	2300	1.63	80	57	47	40	33	24
	100	1700	0.76	74	53	44	35	31	22
	100	1400	0.51	69	49	41	32	28	20
	100	1100	0.34	61	43	36	29	25	18
	100	750	0.22	47	33	28	22	19	14
3. A solid wall, rendered externally, consisting of solid cast concrete or solid concrete blocks or slabs and conforming to the limit in column (2) and to the limit in column (3) or (4); and									
(a) insulating material is attached directly to the inner face; or	200	2300	1.63	117	83	69	55	48	34
	200	1700	0.76	106	75	62	50	43	31
	200	1400	0.51	97	68	57	45	40	28
	200	1100	0.34	82	58	48	38	33	24
	200	750	0.22	56	39	33	26	23	16
(b) insulating material is separated from the inner face by an airspace not less than 20 mm wide	200	2300	1.63	102	72	60	48	42	30
	200	1700	0.76	91	64	53	43	37	27
	200	1400	0.51	81	57	48	38	33	24
	200	1100	0.34	66	47	39	31	27	19
	200	750	0.22	40	28	24	19	17	12

Part II: Specifications relating to buildings, or parts, of purpose group II, III, IV, V or VII or (if not for storage) VIII – continued

Table 1: Walls – continued

(1) Description of wall	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
4. A wall, rendered externally, of solid cast concrete or solid concrete blocks or slabs conforming to the limit in column (3) or (4)–									
(a) in a single leaf conforming to the limit in column (2); or	848 565 357	1400 1100 750	0.51 0.34 0.22						
(b) in two leaves of similar thickness and composition, separated by a cavity not less than 20 mm wide, the two leaves together conforming to the limit in column (2)	706 470 301	1400 1100 750	0.51 0.34 0.22						
5. A composite wall containing a cavity not less than 20 mm wide and comprising–									
(a) an external cladding of metal, glass or plastics sheet; and									
(i) insulating material and an internal lining of gypsum plasterboard secured to studding; or				—	—	69	55	48	34
(ii) an inner leaf of solid cast concrete or solid concrete blocks or slabs conforming to the limit in column (2) and to the limit in column (3) or (4); or	667 444 288	1400 1100 750	0.51 0.34 0.22						

(b) an external veneer of single-leaf brickwork or of tiles or weatherboarding secured on battens with a background of breather paper and counter-battens sufficient to preserve the required cavity; and										
(i) insulating material and an internal lining of gypsum plasterboard secured to studding; or				—	—	63	50	44	31
(ii) an inner leaf of solid cast concrete or solid concrete blocks or slabs conforming to the limit in column (2) and to the limit in column (3) or (4)	621 414 268	1400 1100 750	0.51 0.34 0.22						

Part II: Specifications relating to buildings, or parts, of purpose group II, III, IV, V or VII or (if not for storage) VIII – continued

Table 2: Floors exposed to the external air

(1) Description of floor	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
1. Floor of slabs or hollow beams of dense concrete conforming to the limit in column (2) with–									
(a) insulating material in direct contact with the upper or lower surface of the floor; or	100			—	—	68	54	47	34
(b) insulating material separated by an airspace not less than 20 mm wide from the upper or lower surface of the floor	100			—	—	57	46	40	29
2. Floor of slabs or beams of autoclaved aerated concrete conforming to the limit in column (2) and to the limit in column (3) or (4) with–									
(a) no additional insulation; or	250	600	0.18						
(b) insulating material in direct contact with the upper or lower surface of the floor; or	200	600	0.18	27	19	16	13	11	8
	150	600	0.18	50	36	30	24	21	15
	100	600	0.18	74	52	44	35	31	22
(c) insulating material separated by an airspace not less than 20 mm wide from the upper or lower surface of the floor	200	600	0.18	9	6	5	4	4	3
	150	600	0.18	32	23	19	15	13	10
	100	600	0.18	56	40	33	26	23	16

Part II: Specifications relating to buildings, or parts, of purpose group II, III, IV, V or VII or (if not for storage) VIII – continued

Table 3: Roofs

(1) Description of roof	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulation material referred to in column (1) according to type					
				A	B	C	D	E	F
1. Any roof not precisely specified in this Table which contains insulating material, including sandwich construction of mineral fibre with requisite spacers between asbestos-cement corrugated sheets				—	—	—	60	50	35
2. Pitched roof of slates or tiles on sarking felt or sarking paper (or a pitched or flat roof of any waterproof material on boarding not less than 16 mm thick) having a ventilated space between the underside of the roof and a separate ceiling to the room below, with–									
(a) insulating material in direct contact with that ceiling; or				—	—	—	46	38	28
(b) insulating material separated from either surface of the ceiling by an airspace not less than 20 mm wide				—	—	—	—	34	24
3. Pitched or flat roof of asbestos-cement or metal decking laid on boarding conforming to the limits in columns (2) and (4) with–									
(a) insulating material in contact with the roof covering or the soffit of the assembly; or	12.5		0.05	—	—	—	—	32	23

Part II: Specifications relating to buildings, or parts, of purpose group II, III, IV, V or VII or (if not for storage) VIII – continued

Table 3: Roofs – continued

(1) Description of roof	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
3. continued									
(b) insulating material separated from the soffit by an airspace not less than 20 mm wide	12.5		0.05	—	—	—	—	25	18
4. Pitched or flat weatherproofed decking of wood wool slabs of density not exceeding 500 kg/m³ and conforming to the relevant limit in column (2) with–									
(a) insulating material in contact with the roof covering or the top or soffit of the decking; or	50			—	—	—	—	31	20
	76			—	—	—	—	25	16
(b) insulating material separated from either surface of the decking by an airspace not less than 20 mm wide	50			—	—	—	—	21	13
	76			—	—	—	—	15	10
5. Pitched or flat roof of dense concrete hollow or solid beams or slabs either unscreeded or screeded to an average thickness of not less than 40 mm with material conforming to the limit in column (3) or (4) with–									
(a) insulating material in contact with the roof covering or the upper face or soffit of the concrete members; or	Unscreeded			—	—	70	—	49	35
	Screeded	1400	0.51	—	—	66	—	46	33
	Screeded	1100	0.34	—	—	64	—	45	32
	Screeded	750	0.22	—	—	60	—	43	30
	Screeded	400	0.15	—	—	57	—	40	28

(b) insulating material separated from the soffit of the concrete members by an airspace not less than 20 mm wide	Unscreeded			—	—	—	—	44	31
	Screeded	1400	0.51	—	—	—	—	41	29
	Screeded	1100	0.34	—	—	—	—	39	28
	Screeded	750	0.22	—	—	—	—	37	27
	Screeded	400	0.15	—	—	—	—	34	25
6. Roof of slabs or beams of autoclaved aerated concrete conforming to the relevant limit in column (2) and to the limit in column (3) or (4) with insulating material in contact with the concrete members	250	600	0.18	11	8	6	—	4	3
	200	600	0.18	35	24	20	—	14	10
	150	600	0.18	58	41	34	—	24	17
	100	600	0.18	—	—	48	—	34	24

Part III: Specifications relating to buildings, or parts, of purpose group VI or (if for storage) VIII

Table 4: Walls

(1) Description of wall	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
1. Any wall not precisely specified in this Table–									
(a) of solid or composite construction containing insulating material; or				106	75	62	50	44	31
(b) of composite construction containing insulating material and enclosing an airspace not less than 20 mm wide				91	64	53	43	37	27
2. A cavity wall comprising an outer leaf of brickwork and an inner leaf either of brickwork or of solid concrete blocks or slabs each leaf conforming to the limit in column (2); and									
(a) the cavity is completely filled by insulating material; and									
(i) the inner leaf is of brickwork; or	100			80	56	47	37	33	23
(ii) the inner leaf is of concrete blocks or slabs conforming to the limit in column (3) or (4); or	100	2300	1.63	91	64	53	43	37	27
	100	1700	0.76	85	60	50	40	35	25
	100	1400	0.51	80	56	47	37	33	23
	100	1100	0.34	71	50	42	33	29	21
	100	750	0.22	57	40	34	27	24	17
(b) the cavity is partly filled by insulating material attached to either face of the inner leaf; and (i) the inner leaf is of brickwork; or	100			64	45	38	30	26	19

(ii) the inner leaf is of concrete blocks or slabs conforming to the limit in column (3) or (4); or	100	2300	1.63	75	53	44	35	31	22
	100	1700	0.76	69	49	41	33	29	20
	100	1400	0.51	64	45	38	30	26	19
	100	1100	0.34	56	39	33	26	23	16
	100	750	0.22	42	30	25	20	17	12
(c) the insulating material is separated from the inner face of the inner leaf by an airspace not less than 20 mm wide; and									
(i) the inner leaf is of brickwork; or	100			49	34	29	23	20	14
(ii) the inner leaf is of concrete blocks or slabs conforming to the limit in column (3) or (4)	100	2300	1.63	60	42	35	28	25	18
	100	1700	0.76	54	38	32	25	22	16
	100	1400	0.51	49	34	29	23	20	14
	100	1100	0.34	40	28	24	19	17	12
	100	750	0.22	27	19	16	13	11	8
3. A solid wall, rendered externally, consisting of solid cast concrete or solid concrete blocks or slabs and conforming to the limit in column (2) and to the limit in column (3) or (4); and									
(a) insulating material is attached directly to the inner face; or	200	2300	1.63	97	68	56	45	40	28
	200	1700	0.76	85	61	51	40	35	25
	200	1400	0.51	76	54	45	36	31	22
	200	1100	0.34	61	43	36	29	25	18
	200	750	0.22	35	25	21	17	14	10
(b) insulating material is separated from the inner face by an airspace not less than 20 mm wide	200	2300	1.63	81	57	48	38	33	24
	200	1700	0.76	71	50	42	33	29	21
	200	1400	0.51	61	43	36	29	25	18
	200	1100	0.34	46	33	27	22	19	14
	200	750	0.22	20	14	12	9	8	6

Part III: Specifications relating to buildings, or parts, of purpose group VI or (if for storage) VIII – continued

Table 4: Walls – continued

(1) Description of wall	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
4. A wall, rendered externally, of solid cast concrete or solid concrete blocks or slabs conforming to the limit in column (3) or (4)–									
(a) in a single leaf conforming to the limit in column (2); or	712 475 300	1400 1100 750	0.51 0.34 0.22						
(b) in two leaves of similar thickness and composition, separated by a cavity not less than 20 mm wide, the two leaves together conforming to the limit in column (2)	577 385 250	1400 1100 750	0.51 0.34 0.22						
5. A composite wall containing a cavity not less than 20 mm wide and comprising–									
(a) an external cladding of metal, glass or plastics sheet; and									
(i) insulating material and an internal lining of gypsum plasterboard secured to studding; or				—	—	54	43	38	27
(ii) an inner leaf of solid cast concrete or solid concrete blocks or slabs conforming to the limit in column (2) and to the limit in column (3) or (4); or	546 364 235	1400 1100 750	0.51 0.34 0.22						

(b) an external veneer of single-leaf brickwork or of tiles or weatherboarding secured on battens with a background of breather paper and counter-battens sufficient to preserve the required cavity; and										
(i) insulating material and an internal lining of gypsum plasterboard secured to studding; or				—	—	48	38	34	24
(ii) an inner leaf of solid cast concrete or solid concrete blocks or slabs conforming to the limit in column (2) and to the limit in column (3) or (4)	500 333 216	1400 1100 750	0.51 0.34 0.22						

Part III: Specifications relating to buildings, or parts, of purpose group VI or (if for storage) VIII – continued

Table 5: Floors exposed to the external air

(1) Description of floor	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
1. Floor of slabs or hollow beams of dense concrete conforming to the limit in column (2) with–									
(a) insulating material in direct contact with the upper or lower surface of the floor; or	100			—	—	56	45	39	28
(b) insulating material separated by an airspace not less than 20 mm wide from the upper or lower surface of the floor	100			—	—	46	36	32	23
2. Floor of slabs or beams of autoclaved aerated concrete conforming to the limit in column (2) and to the limit in columns (3) or (4) with–									
(a) no additional insulation; or	250	600	0.18						
(b) insulating material in direct contact with the upper or lower surface of the floor; or	200	600	0.18	7	5	4	3	3	2
	150	600	0.18	30	21	18	14	12	9
	100	600	0.18	54	38	32	25	22	16
(c) insulating material separated by an airspace not less than 20 mm wide from the upper or lower surface of the floor	150	600	0.18	12	9	7	6	5	4
	100	600	0.18	36	25	21	17	15	11

Part III: Specifications relating to buildings, or parts, of purpose group VI or (if for storage) VIII – continued

Table 6: Roofs

(1) Description of roof	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
1. Any roof not precisely specified in this Table which contains insulating material, including sandwich construction of mineral fibre with requisite spacers between asbestos-cement corrugated sheets				—	—	—	50	42	29
2. Pitched roof of slates or tiles on sarking felt or sarking paper (or a pitched or flat roof of any waterproof material on boarding not less than 16 mm thick) having a ventilated space between the underside of the roof and a separate ceiling to the room below, with–									
(a) insulating material in direct contact with that ceiling; or				—	—	—	36	30	22
(b) insulating material separated from either surface of the ceiling by an airspace not less than 20 mm wide				—	—	—	—	26	19
3. Pitched or flat roof of asbestos-cement or metal decking laid on boarding conforming to the limits in columns (2) and (4) with–									
(a) insulating material in contact with the roof covering or the soffit of the assembly; or	12.5		0.05	—	—	—	—	24	17
(b) insulating material separated from the soffit by an airspace not less than 20 mm wide	12.5		0.05	—	—	—	—	17	9

Part III: Specifications relating to buildings, or parts, of purpose group VI or (if for storage) VIII – continued

Table 6: Roofs – continued

(1) Description of roof	(2) Minimum thickness (in mm)	(3) Maximum density (in kg/m³)	(4) Maximum thermal conductivity (in W/m°C)	(5) Minimum thickness (in mm) of insulating material referred to in column (1) according to type					
				A	B	C	D	E	F
4. Pitched or flat weatherproofed decking of wood wool slabs of density not exceeding 500 kg/m³ and conforming to the relevant limit in column (2) with–									
(a) insulating material in contact with the roof covering or the top or soffit of the decking; or	50			—	—	—	—	22	15
	76			—	—	—	—	16	10
(b) insulating material separated from either surface of the decking by an airspace not less than 20 mm wide	50			—	—	—	—	13	8
	76			—	—	—	—	6	4
5 Pitched or flat roof of dense concrete hollow or solid beams or slabs either unscreeded or screeded to an average thickness of not less than 40 mm with material conforming to the limit in column (3) or (4) with–									
(a) insulating material in contact with the roof covering or the upper face or soffit of the concrete members; or	Unscreeded			—	—	58	—	41	29
	Screeded	1400	0.51	—	—	54	—	38	27
	Screeded	1100	0.34	—	—	52	—	37	26
	Screeded	750	0.22	—	—	49	—	35	25
	Screeded	400	0.15	—	—	45	—	31	22
(b) insulating material separated from the soffit of the concrete members by an airspace not less than 20 mm wide	Unscreeded			—	—	—	—	35	25
	Screeded	1400	0.51	—	—	—	—	33	23
	Screeded	1100	0.34	—	—	—	—	31	22
	Screeded	750	0.22	71	—	—	—	29	21
	Screeded	400	0.15	63	—	—	—	26	19

6. Roof of slabs or beams of autoclaved aerated concrete conforming to the relevant limit in column (2) and to the limit in column (3) or (4) with–									
(a) no additional insulation; or	250	600	0.18						
(b) insulating material in contact with the concrete members	200	600	0.18	14	10	8	—	6	4
	150	600	0.18	38	27	22	—	16	11
	100	600	0 18	62	43	36	—	25	18

17th May 1978.

Peter Shore
Secretary of State for the Environment.

EXPLANATORY NOTE

(This Note is not part of the Regulations.)

These Regulations amend the Building Regulations 1976 and, like the latter, apply throughout England and Wales apart from Inner London.
They come into operation on 1st June 1979 but do not apply to work which was completed, or for which plans have been deposited with the local authority, before that date.

These Regulations introduce provisions made for the purpose of furthering the conservation of fuel and power. The provisions contained in the new Part FF and Schedule 11A (introduced by regulations 10 and 13 respectively) apply, subject to certain exceptions, to all buildings other than those consisting of dwellings (the thermal insulation of which is already controlled by the existing Part F).

The main regulations in new Part FF comprise—

(*a*) a mandatory requirement, expressed in functional terms, requiring a building, or part of a building, to be so designed and constructed that the enclosing structure provides adequate resistance to the passage of heat (Regulation FF3); and

(*b*) provisions specifying alternative, but not exhaustive, measures which, if adopted, will be deemed to satisfy the mandatory requirement (Regulation FF4).

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