ADB Para 10.6

Materials and products

10.6 In a building with a storey 18m or more in height (see Diagram D6 in Appendix D) any insulation product, filler material (such as the core materials of metal composite panels, sandwich panels and window spandrel panels but not including gaskets, sealants and similar) etc. used in the construction of an external wall should be class A2-s3, d2 or better (see Appendix B). This restriction does not apply to masonry cavity wall construction which complies with Diagram 8.2 in Section 8. Where regulation 7(2) applies, that regulation prevails over all the provisions in this paragraph.

Table B1 ADB Vol 1&2 2019

Table B1 Reaction to fire classifications: transposition to national class

BS EN 13501-1 classification	Transposition
A1	Material that, when tested to **BS 476-11**, does not either: a. flame b. cause a rise in temperature on either the thermocouple at the centre of the specimen or in the furnaces
A2-s1, d0	None
A2-s3, d2	Material that meets either of the following. a. Any material of density 300kg/m³ or more, which, when tested to **BS 476-11**, complies with both of the following: i. does not flame ii. causes a rise in temperature on the furnace thermocouple not exceeding 20°C b. Any material of density less than 300kg/m³, which, when tested to **BS 476-11**, complies with both of the following: i. does not flame for more than 10 seconds ii. causes a rise in temperature on the thermocouple at the centre of the specimen or in the furnace that is a maximum of 35°C and on the furnace thermocouple that is a maximum of 25°C
B-s3, d2	Any material that meets both of the following criteria. a. Class 1 in accordance with **BS 476-7**. b. Has a fire propagation index (I) of a maximum of 12 and sub-index (i1) of a maximum of 6, determined by using the method given in **BS 476-6**. Index of performance (I) relates to the overall test performance, whereas sub-index (i1) is derived from the first three minutes of the test
C-s3, d2	Class 1 in accordance with **BS 476-7**
D-s3, d2	Class 3 in accordance with **BS 476-7**

Shutters, Blinds etc

- High Court Ruling 27/11/19
- Failure to properly consult on “a device for reducing heat gain within a building by deflecting sunlight which is attached to an external wall”
- 10/12/19 MHCLG Circular 03/2019
- As a result Reg 7 currently does not apply to shutters, blinds and other devices designed to reduce a buildings heat gain.
- Currently under review however advice from MHCLG remains unchanged from December 2018

2020 MHCLG Publications

- Consolidated Building Safety Advice for building owners (20/01/2020) includes buildings below 18m, buildings with assisted evacuation etc.
- Review of the ban on the use of combustible materials in and on the external walls of buildings including attachments.
- Technical consultation paper (20/01/2020) review closes 13/04/2020.
- Includes consultation on building types, height, ACM, cavity trays, laminated glass, attachments etc

20th January 2020 Announcement

- Housing Secretary Robert Jenrick.
- "Name and shame" building owners taking no action.
- Building Safety Regulator (to operate within HSE).
- Fire Safety Bill – requiring residential building owners to consider and mitigate risks of external walls/flat doors
- Awaiting results of September 2019 consultation "Sprinklers and other fire safety measures in new high-rise blocks of flats"
- Sprinklers, wayfinding, evacuation alert.

Regulation 7(2)

10.10 Regulation 7(2) applies to any building with a storey at least 18m above ground level (as measured in accordance with Diagram D6 in Appendix D) and which contains one or more dwellings; an institution; or a room for residential purposes (excluding any room in a hostel, hotel or a boarding house). It requires that all materials which become part of an external wall or specified attachment achieve class A2-s1, d0 or class A1, other than those exempted by regulation 7(3).

NOTE: The above includes student accommodation, care homes, sheltered housing, hospitals and dormitories in boarding schools. See regulation 7(4) for the definition of relevant buildings.

NOTE: The requirement in regulation 7(2) is limited to materials achieving class A2-s1, d0 or class A1.

10.11 External walls and specified attachments are defined in regulation 2 and these definitions include any parts of the external wall as well as balconies, solar panels and sun shading.

10.12 Regulation 7(3) provides an exemption for certain components found in external walls and specified attachments.

Regulation 7(3)

(3) Paragraph (2) does not apply to—

(a) cavity trays when used between two leaves of masonry;

(b) any part of a roof (other than any part of a roof which falls within paragraph (iv) of regulation 2(6)) if that part is connected to an external wall;

(c) door frames and doors;

(d) electrical installations;

(e) insulation and water proofing materials used below ground level;

(f) intumescent and fire stopping materials where the inclusion of the materials is necessary to meet the requirements of Part B of Schedule 1;

(g) membranes;

(h) seals, gaskets, fixings, sealants and backer rods;

(i) thermal break materials where the inclusion of the materials is necessary to meet the thermal bridging requirements of Part L of Schedule 1; or

(j) window frames and glass.

10.15 Particular attention is drawn to the following points.

a. Membranes used as part of the external wall construction above ground level should achieve a minimum of class B-s3, d0.

b. Internal linings should comply with the guidance provided in Section 4.

c. Any part of a roof should achieve the minimum performance as detailed in Section 12.

d. As per regulation 7(3), window frames and glass (including laminated glass) are exempted from regulation 7(2). Window spandrel panels and infill panels must comply with regulation 7(2).

e. Thermal breaks are small elements used as part of the external wall construction to restrict thermal bridging. There is no minimum performance for these materials. However, they should not span two compartments and should be limited in size to the minimum required to restrict the thermal bridging (the principal insulation layer is not to be regarded as a thermal break).

f. Regulation 7(2) only applies to specified attachments. Shop front signs and similar attachments are not covered by the requirements of regulation 7(2), although attention is drawn to paragraph 10.15g.

g. While regulation 7(2) applies to materials which become part of an external wall or specified attachment, consideration should be given to other attachments to the wall which could impact on the risk of fire spread over the wall.

Material Change of Use

Material change of use

10.13 Regulations 5(k) and 6(3) provide that, where the use of a building is changed such that the building becomes a building described in regulation 7(4), the construction of the external walls, and specified attachments, must be investigated and, where necessary, work must be carried out to ensure they only contain materials achieving class A2-s1, d0 or class A1, other than those exempted by regulation 7(3).

Approved Document B Vol 1 & 2 2019

The main changes are:

Approved Document B has been redrafted to clarify its language and content in line with the Department's style guide for approved documents. This edition of the approved document replaces the 2006 edition including all amendments. There are no changes from the previous edition to the technical guidance within Approved Document B.

As well as furthering the use of plain English, the document has been significantly restructured:

- The design of blocks of flats has moved from volume 2 to volume 1.
- Guidance on the design of sprinkler systems has been consolidated to a new Appendix E.
- European fire classifications are provided within the main body of the document with transposition to a national classification provided in Appendix B.
- The guidance on external stairs has been consolidated.
- Fire safety information (under regulation 38) has been moved from an appendix into a new section.
- The guidance on insulating core panels has moved from an appendix into the Wall and ceiling linings section.
- The guidance on fire dampers and ventilation systems has been consolidated.

Approved Document B Vol 1 & 2 2019

- Volume 1 now includes dwellings and apartments of all heights.
- Regulation 7 included and more clarity on external walls and insulation materials.
- Presentation style includes more diagrammatic representation of guidance.
- Two examples to follow.
- Updated references.
- Other than Regulation 7 no technical requirement changes.

See para 2.24

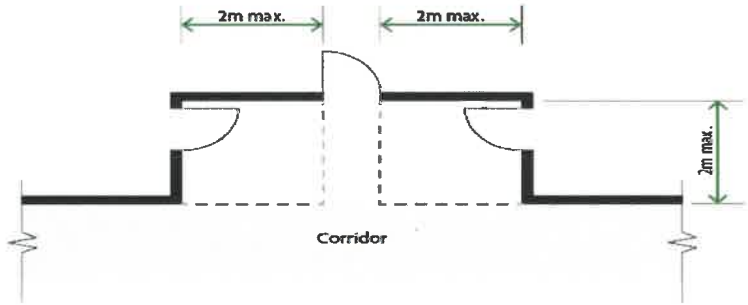


Diagram 2.7 Recesses off corridors

See para 2.24

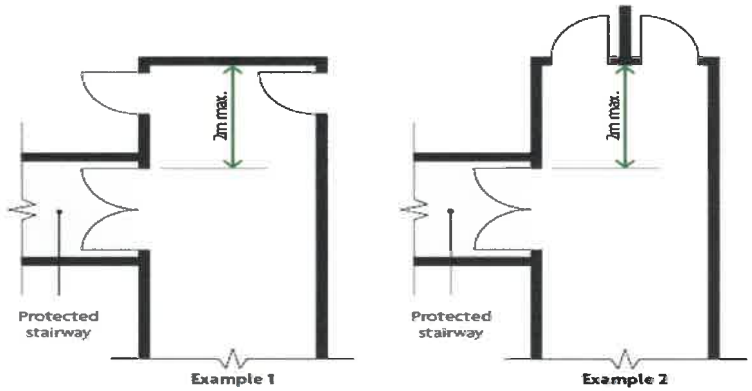
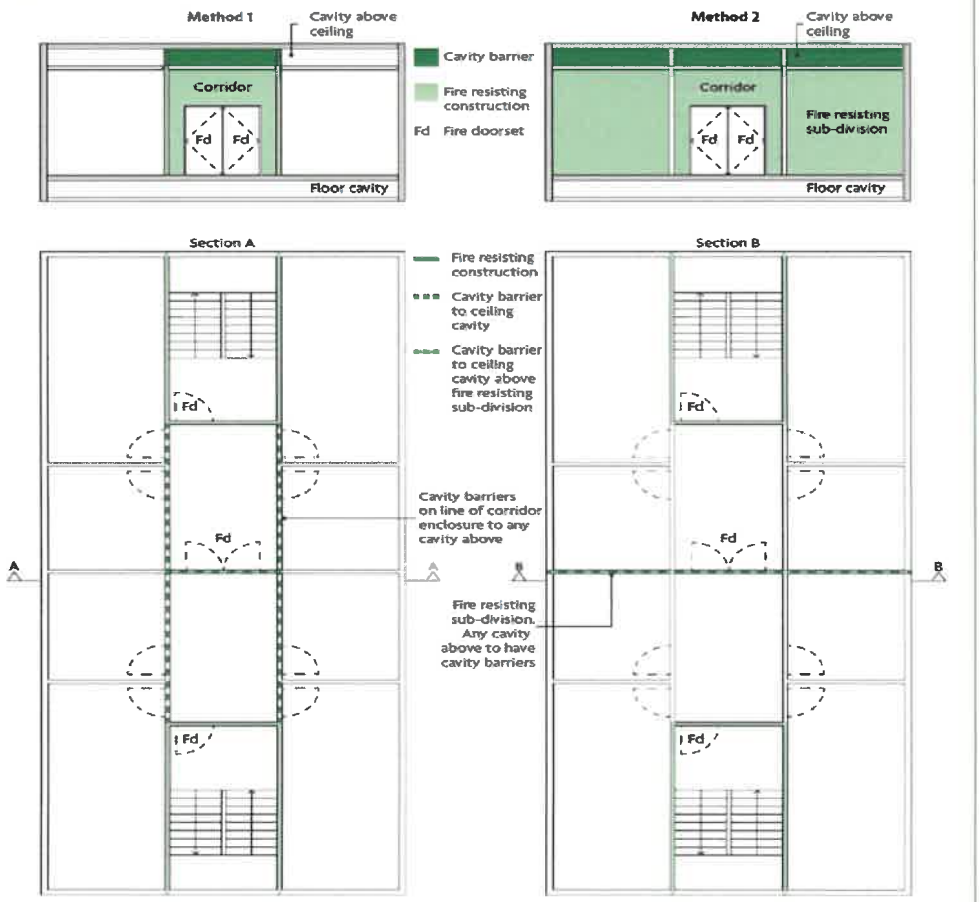


Diagram 2.8 Extension of corridor beyond a protected stairway

See para 2.27



NOTES:
For all methods, where the corridor is a protected escape route, cavity barriers may also be required in any floor cavity beneath the corridor enclosure (see paragraph 9.5).

The sub-division should be carried to full storey height and includes sub-division of the corridor. A cavity barrier may be used in any ceiling cavity over the sub-division.

Diagram 2.9 Division of corridors

The Future Homes Standard

- 2019 Consultation on changes to Part L (Conservation of fuel and power) and changes to Part F (Ventilation) of the Building Regulations for new dwellings.
- Published 1st October 2019
- Consultation closes 11.45pm 7th February 2020 (extended from 10th January 2020)
- Options for 2020
- New build homes to be "future –proofed with low carbon heating and "world beating levels of energy efficiency" by 2025

The Future Homes Standard

- Early/Mid 2020 new Parts F & L and regulations to prevent overheating published.
- Mid/Late 2020 coming into force.
- Stricter transitional provisions (per building rather than per application).
- BREL design and construction compliance reports including specific products and photographic evidence.
- Air tightness testing of all dwellings.

The Future Homes Standard

- 20-30% improvement in 2020.
- 2 options proposed.
- Energy target and householder affordability introduced.
- Fabric energy efficiency target removed TFEE/DFEE
- Consolidate into Vol 1 & 2 (removal of a & b new build/existing building separate guidance)
- Further consultations to follow on existing dwellings and non-domestic buildings.

Part L 2020 proposals

- Option 1 20% improvement greater fabric efficiency incl triple glazing and waste water heat recovery
- Option 2 31% improvement with minor fabric efficiency however incl low carbon energy ie photovoltaics and/or heat pumps.
- Option 2 being the favoured option.
- Primary energy target/SAP 10 (CO2 emissions)/householder affordability rating /minimum standards for fabric and fixed building services.

Further ahead 2025

- Gas boilers banned from new homes 2025 onwards ?
- Move towards zero carbon grid – CO2 measure becomes less important.
- Restrict or remove powers of local planning authorities to impose higher standards.
- Targetted 75-80% improvement in efficiency from 2013-2025

Limiting Value Comparison 2020-2013

Pitched roof – insulation at ceiling level	0.16
All other roof types[2]	0.16
Wall	0.26
Floor	0.18
Party wall	0.20
Swimming pool basin	0.25
Window or roof window[4,5]	1.6
Roof-light[7,8,9]	2.2
Doors (including glazed doors)	1.6
Air Permeability	8.0 m^3/ $h.m^2$ at 50Pa

- Roof 0.20
- Wall 0.30
- Floor 0.25
- Party Wall 0.25
- Swimming Pool Basin 0.25
- Windows/rooflights/doors 2.00
- Air Permeability 10

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