



# Guiding you to safety



Fire Doors are required in almost every building built in the UK according to the requirements of the relevant national fire safety regulations. English and Welsh Building Regulations, are divided into Parts, with corresponding Approved Documents providing guidance as to how to achieve the requirements of each part. Building Regulations in Scotland are divided into Technical Handbooks and in Northern Ireland into Technical Booklets.

The following information is based on the England and Wales Building Regulations. The Regulations in Scotland and Northern Ireland only containing minor differences. The table overleaf indicates which regulations affect fire doors and gives clarification on where to find the corresponding information for Scotland and Northern Ireland.

## Approved Document B – Fire Safety

The principal regulation and guidance affecting fire doors is contained in Approved Document B : 2006 edition incorporating 2010 amendments : Volumes 1 and 2. These specifically cover fire safety guidance for buildings in which fire doors play a unique role.

### **Where should fire doors be fitted?**

The guidance requires that a building is divided into compartments, protecting escape routes, such as corridors and staircases.

In domestic dwellings above two levels, every door leading to the stairwell (at all levels) must be a fire door, where the door leads to a habitable room. (i.e not a bathroom or w/c). Fire doors are also required in loft conversions; between house and integral garage; and between the business and residential elements in a mixed-use building.

For non-domestic buildings, guidance is divided into two sections based on horizontal and vertical escape routes.

### **What fire resistance period should be required\*?**

In a compartment wall that separates buildings, the fire door must match the fire resistance period of the wall containing the door with a minimum period of 60 minutes. In all other situations, a 30 minute fire door (FD30) is allowed. Approved Document B identifies the use of 20 minute fire doors (FD20) in some circumstances. However, the BWF-CERTIFIRE Scheme recommends that any fire door should be designed to last a minimum of 30 minutes, so an FD20 is no longer manufactured by Scheme members. (*See our fact card Explaining FD20 and FD30 Fire Doors*).

\* refer to Table B1 AD B Volume 2

- Fire Safety
- Sound
- Ventilation
- Thermal
- Accessibility
- Glazing Safety

## Where is signage required?

Correct signage is required on all fire doors installed in non-domestic buildings. Signs should be put on both sides of the door and must clearly indicate that the door is a fire door and any further instructions required such as "Keep Closed" or "Keep Locked". Standard signs are generally available from fire door stockists.

## Where are smoke seals required?

Smoke seals are recommended on doors approaching or protecting escape shafts such as stairs and corridors and where a door separates a private area from a common space such as a flat front door. Smoke seals are also recommended on doors in sections of corridors that lead to dead ends. Note: Where smoke seals are required, the threshold gap must be set at no more than 3 mm.

## Approved Document E – Resistance to Sound

This document explains the minimum sound resistance performance recommended for buildings of multiple occupancy. Where a door separates the occupants of a building, for example, the front door of an apartment, the door must maintain the sound performance requirements. Sound performance of a door is generally based on the weight, with higher density materials giving more resistance to sound.

Acoustic seals may be required on a fire door, including at the threshold.

## Approved Document F – Ventilation

In domestic buildings, a ventilation gap totalling 7600 mm<sup>2</sup> is recommended at the threshold of the door, to allow air movement throughout the building. This measurement is taken from the highest finished floor covering to the bottom edge of the door. For a 762 mm wide door, this represents a 10 mm gap, (reducing to 8 mm for a 926 mm wide door). This can be achieved by making an undercut of 10 mm above the fitted floor finish.

For non-domestic buildings, the ventilation requirements are likely to be the responsibility of the heating and ventilating designer.

## Approved Document L – Conservation of fuel and power

Where a fire door divides a heated and unheated area, it will be required to provide a thermal performance (energy efficiency) that will control the heat leakage. Examples of this are flats with doors leading to common corridors, integral garages or external doors.

## Approved Document M – Access to and Use of Buildings

This document introduces a number of recommendations to improve access to and movement through buildings for disabled persons.

### • Minimum door widths

**For domestic situations**, the minimum clear door opening required when approach can be made head on is 750 mm, which increases to 800 mm if passing through the doorway from a corridor that is 900 mm wide.

**For non-domestic buildings**, a minimum of 800 mm clear opening is required when the approach can be made straight-on, which increases to 825 mm if passing through a doorway from a corridor that is 1200 mm wide.

Access through an external door for non-domestic buildings requires a clear opening of 1000 mm irrespective of the approach. Measurements for replacement doors in existing, non-domestic buildings are slightly less.

### • Visual contrast for doors and surroundings

For non-domestic buildings, door opening furniture must contrast visually with the door surface, as must the leading edge of a door if a hold-open device is used. The frame or architraves should contrast visually with the surrounding wall so that the exit is clearly identifiable.

### • Minimum Opening Forces

For non-domestic buildings where doors need to be opened manually, the opening force at the leading edge of the door must not exceed 20 N.

### • Provision of vision panels (glazed apertures)

Where required vision panels (glazed apertures) should be fitted between 500 mm and 1500 mm from the top of the floor covering, although a division is allowed between 800 mm and 1150 mm from the floor.

## Approved Document N – Glazing safety

Safety glass is required in a fire door when located under 1500 mm from floor level or if the smaller dimension of the glazing area is greater than 250 mm. This applies to both domestic and non-domestic buildings.

*For a copy of the regulations and guidance documents please contact the relevant authority. England and Wales – Dept. of Communities and Local Government – [www.planningportal.gov.uk/buildingregulations](http://www.planningportal.gov.uk/buildingregulations)*

*Scotland – Building Standards in Scotland – [www.scotland.gov.uk](http://www.scotland.gov.uk)*

*Northern Ireland – Technical Booklets – [www.buildingcontrol-ni.com](http://www.buildingcontrol-ni.com)*

*This information is guidance only. Refer to relevant authority before implementation.*

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### Summary of National Fire Safety Regulations for UK

Performance	Regulatory Parts		
	England & Wales – approved documents	Scotland – Sections	Northern Ireland – Technical Booklets
Fire Safety	<b>B</b>	<b>2</b>	<b>E</b>
Sound	<b>E</b>	<b>5</b>	<b>G</b>
Ventilation	<b>F</b>	<b>3</b>	<b>K</b>
Thermal	<b>L</b>	<b>6</b>	<b>F</b>
Accessibility	<b>M</b>	<b>3</b>	<b>R</b>
Safety Glazing	<b>N</b>	<b>4</b>	<b>V</b>

### Effective clear widths of doors

Direction of approach of wheelchair	Min. effective clear width of door leaf (mm)	
Direction of approach of wheelchair	New buildings	Existing buildings
Straight-on (without turn or oblique approach)	800	750
At right angles from an access route at least 1500 mm wide	800	750
At right angles from an access route at least 1200 mm wide	825	775
At right angles from an access route at least 900 mm wide <i>Note: For 900 mm wide, refers to BS 8300:2008</i>	850 (dwellings only)	800
External doors and internal lobby doors at the entrance of buildings used by the general public	1000	775

