

# Doorpac fact sheet 9

## Building regulations

### Including:

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



Fire Doors are required in almost every building built in the UK & Northern Ireland 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 Sections 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 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. This document specifically covers fire safety guidance for building in which fire doors play a unique role. The specific guidance given on fire doors is explained below.

#### Where should fire doors be fitted?

In domestic buildings, every door on the third level or above must be a fire door, and on the second level if over 4.5m from ground level. If the second level is under 4.5m high, either an escape window or fire doors can be used. Fire doors are also required in loft conversions, between house and garage where the garage is integral and between the business and residential elements in a mixed use building. For non-domestic buildings, guidance is divided into 2 sections based on horizontal and vertical escape routes. The guidance requires that a building is divided into compartments, protecting routes of escape such as corridors and staircases.

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

In a wall that separates buildings or compartments, 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 recommends that any fire door should be designed to last a minimum of 30 minutes, so FD20s are no longer manufactured by Scheme members.



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	Regulatory Parts		
Performance	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>

### Where is signage required?

Signage is recommended 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 sections of corridors that lead to deadends.

**Approved Document E – Sound:** This document explains the minimum sound resistance performance recommended for buildings of multiple occupancy. Where a door separates the occupants of 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.

**Approved Document E – Sound:** In domestic buildings, a ventilation gap totalling 7600mm<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 762mm wide door, this represents a 10mm gap, reducing to 8mm for a 926mm wide door. For non-domestic buildings, the ventilation requirements are likely to be the responsibility of the heating and ventilating designer.

**Approved Document E – Sound:** 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 E – Sound:** 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 750mm, which increases to 800mm if passing through the doorway from a corridor that is 900mm wide. For non-domestic buildings, a minimum of 800mm clear opening is required when the approach can be made straight-on, which increases to 825mm if passing through a doorway from a corridor that is 1200mm wide. Access through an external door for non-domestic buildings requires a clear opening of 1000mm irrespective of the approach. Measurements for replacement doors in existing, non-domestic buildings are slightly less.

### Colour 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 Newtons (N).

### Provision of vision panels

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

## Approved Document N – Safety Glazing

Safety glass is required in a fire door when located under 1500mm from floor level or if the smallest dimension of the glazing area is greater than 250mm.

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.communities.gov.uk](http://www.communities.gov.uk)

Scotland – Scottish Building Standards Agency – [www.sbsa.gov.uk](http://www.sbsa.gov.uk)

Northern Ireland – Dept. of Finance & Personnel – [www.dfpni.gov.uk](http://www.dfpni.gov.uk)

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