

WHITEPAPER

Choosing the right doors for the right doorways in apartment buildings



The doors in apartment buildings can vary in their purpose. Some provide access to and from the outside world, others to individual apartments. Still others connect rooms within those apartments, while some are for access to riser cupboards.

This begs the question, what type of door should be used in which situation? This article aims to provide some answers.



Key ratings that show if a door is fit for purpose

The main facets to consider are fire and smoke containment, security, and resistance to the effects of weather. The key to identifying which door meets the requirements of each doorway is by looking at the ratings it has achieved through testing.



Fire and smoke ratings

An EN1634-1 rating denotes that a door meets the required standard of fire and smoke resistance, whichever side of the door a fire starts. FD30 doors provide at least 30 minutes resistance, FD60s 60 minutes.

Regulations for residential buildings generally require fire doors to have FD30 ratings, but there are some exceptions. For example, a fire assessment on a specific building might identify a need for FD60-rated doors. Where this is the case, it becomes a legal requirement for such doors to be fitted, notwithstanding that the standard regulations say otherwise. This is logical: the building regulations set minimum criteria that must be achieved generally, but an individual fire risk assessment can allow for any specific situations pertaining to a particular building.

Even where not legally required, some building owners prefer the extra protection and degree of future proofing (against potentially tighter fire regulations in future) that FD60-rated doors offer, especially on the higher floors of high-rise blocks.

Fire doors are designed to prevent the rapid spread of fire and smoke within a building, so building regulations demand that they are fitted in such a way as to contain fires and give building occupants the greatest chance of either escaping or remaining in situ until rescued. Doors adjoining communal areas always need to restrict fire and smoke.



Security

A PAS24 security rating denotes that a door has passed a series of tests to assess its ability to withstand entry by an intruder. A further level of reassurance is provided when doors have received Secured by Design accreditation. The Secured by Design (SBD) scheme was set up in partnership with Police Crime Prevention Initiatives (Police CPI) to encourage improved design as a means of reducing crime. This includes promoting door designs that enhance the security of building occupants.



The weather

A BS6375 rating denotes that a door has passed various tests for its ability to withstand the effects of weather, including air permeability, water tightness and resistance to wind load. A door that deteriorates under the impact of the weather is also likely to become less effective at withstanding fire and unlawful entry.



Doors are not just doors!

It is important to note that regulations that apply to what most people would think of as 'doors' actually apply to doorsets, which include the the frame and the hardware fitted to both door and frame.

For example, if a door set is generally fire prevention compliant but its letterbox is not, the whole doorset ceases to be compliant because it would not fulfil its fire protection function.

The products Solidcor supplies are complete door sets that have been tested to meet the relevant fire, smoke, security and weatherproofing requirements, and have achieved important third-party accreditation, such as SBD.

Solidcor doorsets come complete with frame and hardware, and are fully compliant with the relevant regulations.

1 Interior doors

Within individual apartments, there is no need for doors between rooms to provide protection against the weather or intruders. Fire-rated doors are required between all habitable rooms in flats whose floors are 4.5m or more above ground level. (A 'habitable room' is one used for living, sleeping, or cooking.) Unlike fire doors in other situations, interior fire doors do not need to be fitted with self-closing devices.

Where flats are less than 4.5 metres high – so those on the ground or some first floors – interior doors don't need to be fire doors, providing occupants have a means of escape, such as a window.

For apartment blocks of four storeys or fewer, where the top floor is less than 11 metres above the ground and there is a single stairway within, fire doors are still not legally required within apartments if there is an extra fire door between the lobby area outside each flat and the stairwell.

The height of an apartment block for the purposes of these regulations is taken as being from the floor of the lowest point in the building to the floor of the highest habitable space.

2 Internal apartment entrance doors

These do not have to provide full weather protection (unless opening on to unheated corridors*) but must have the appropriate fire, smoke and security ratings. While security is considered in terms of keeping unwanted intruders outside as long as possible, fire and smoke protection is required to be equally effective on both sides of the door.

From the point of view of the flat occupants, if a fire is outside their flat, their front door should act as a barrier to it coming in, enabling time for the fire brigade to rescue them or to extinguish the fire. For the other occupants of the block, the door should prevent a fire that has started within the apartment – in fact, most fires do originate within apartments rather than in communal areas – from spreading to other parts of the building.

3 Internal communal doors

Fire doors must be fitted in doorways connecting communal areas, such as those in corridors, but do not have to be security- or weather-rated.

If a doorway connects residential and commercial spaces, such as where flats are above shops, fire doors must be fitted.

4 External doors

Given that the purpose of fire-resistant doors is normally to prevent fire from spreading to adjacent internal areas, no fire rating is usually required on external doors.

However, these doors should protect the fabric of the building from the effects of the weather. For designated fire exits, although they may provide security against outside intruders, they should always be capable of being opened from the inside by people needing to escape a fire. External apartment entrance doors must be security rated.

**Note that unheated internal corridors are regarded as external spaces, so weather-rated doors should be installed where these open on to such corridors.*



Solidcor now offers a range of timber fire doors for internal spaces where weatherproofing is not required.

5 Risers

Although the doors to riser cupboards are not used by building residents, they must play their part in restricting fires and are therefore required to have fire and smoke test ratings. A security rating is not required but, if sited externally, they must be weatherproof.



Governing legislation and regulations

Although they are governed by different sets of rules and regulations in different parts of the UK, the rules around which doors must be used in different locations are substantially the same in the devolved areas as in England.

(Please note, though, that the information in this article is based specifically on our understanding of regulations as they apply in England.)

The key document for understanding compliance requirements around fire doors is **Approved Document B**, but it is important to remember that this is guidance published by the government.

As the document itself says,

“Complying with the guidance in the approved documents does not guarantee that building work complies with the requirements of the regulations...Those responsible for building work must consider whether following the guidance in the approved documents is likely to meet the requirements in the particular circumstances of their case.”

It also explains that,

“There may be other ways to comply with the requirements than those described.”

While compliance with building regulation requirements is essential, best practice for many social housing bodies sometimes entails going beyond the legal minimums, such as fitting FD60 rated doors even where FD30 doors would satisfy their legal obligations.

Don't forget, too, that there are other aspects of doors that need to be compliant. These include accessibility for all users ([as covered in our earlier paper](#)), energy-efficiency and soundproofing.



Quick reference guide

For convenience, we have produced this at-a-glance table to summarise the above information and provide a quick means of establishing the criteria that should usually be fulfilled by the doors used in each different situation.

As mentioned, specific instances can arise during a fire assessment where a door with different ratings to those shown is needed. Therefore, we cannot accept any legal liability arising from the information in the table, which is intended to provide general guidance only.

	Fire & smoke rating (EN1634)	Security rating (PAS24)	Weather rating (BS6375)
External entrance door	No	Yes	Yes
Internal entrance door	Yes	Yes	No*
Internal communal doors	Yes	No	No
Interior doors	On floors >4.5m**	No	No
External riser	No	No	Yes
Internal riser	Yes	No	No

* Unless opening on to an unheated corridor

** Floors less than 4.5 metres above the ground will need interior fire doors if there is no other means of escape, such as a suitable window.



Solidcor offers fire doors for every scenario

We can supply doors for every doorway in your apartment blocks, enabling single-supplier sourcing for your convenience. All our doors have been independently tested and achieved all the standards relevant to the situations in which they might be deployed. Whether it's our new T30 internal door range or fully weatherproof R30 and R60 doors, we offer doors fully compliant with current building regulations, along with an industry leading 10-day turnaround on every order.