

UK fire doors, rules, regulations and gaps

This is a brief summary of fire door position with sources to obtain further information.

1 Regulations

For sources on regulation refer to this link:

www.gov.uk/government/publications/fire-safety-england-regulations-2022/fact-sheet-fire-doors-regulation-10

This link is in small text to keep it on one line!

Note: the 2022 (effective Jan 23) update to these regulations specifically address multi-occupancy buildings over 11m in height. The previously existing regulations apply to general fire precautions in any premises covered by the Fire Safety Order, regardless of the building's height. The Fire Safety Act 2021 clarified that any residential buildings which contains two or more sets of domestic premises are within the scope of the Fire Safety Order.

2 What are the typical issues?

50plus is predominately concerned with retrofit of parts, door replacement or repair. The rules around this are:

- Doors need to be FD30 or FD60 rated (FD30 in most cases)
- A self-closing device fitted which overcomes the latch needs to be fitted
- Hinges: 3 fire rated marked hinges per door need to be fitted
- Intumescent strip needs to be fitted. Note: this can be retro fitted without having to set it into a door or frame. It should be 10mm x 4mm on an FD30 door and 20mm x 4mm on an FD60 door
- Any glazing fitted should be fire resistant
- The gap between the door and threshold should be up to 8mm (unless there is a need to prevent cold smoke)
- The gap between the door and frame (3 sides) should be 4mm to 2mm. This is to allow the intumescent strip to function properly.

Where do fire doors need to be fitted?

- Domestic buildings: Homes with three or more stories need to have a fire door for every door between a stairwell and a habitable room. Any door between an integral garage and a house must also be a fire door. Doors to converted lofts should also be fire doors

- Mixed-use buildings: Any door between a residential and a commercial space must be a fire door
- Commercial buildings: Fire doors must be designed throughout providing a vertical or horizontal escape route through a building. A vertical escape route is one that directs people towards a stairwell. A horizontal escape route is one that directs people to a fireproof space within a floor. This route will need to be lined with fire doors.

Source: <https://www.buildingmaterials.co.uk/info-hub/doors-windows/fire-door-regulations>

3 Door realignment

We have seen a number of inspection reports highlighting incorrect gaps on existing fire doors and saying that the doors should be re-aligned. We have done a lot of investigating into how best to re-align a fire door given that in many instances hinge shims could be needed. Traditional shims are card or plastic which would not stand up to a fire. We have managed to locate stainless-steel shims which would seem to be appropriate. Intumescent hinge pads have also been suggested for use as shims. Both of these would have fire integrity.

4 Further reading

<https://www.safelincs.co.uk/blog/2021/07/07/10-fire-door-questions-answered>

<https://www.rutlanduk.co.uk/what-are-permissible-gaps-around-a-fire-door>

<https://www.firesafe.org.uk/fire-doors/>

<https://performanceadhesives.co.uk/products/framefit/>

The latter is a product to address fire door gaps and make compliant

This document was written in autumn 2023.