

Fire doors – performance in both directions

As for the walls into which they are installed, fire doors must demonstrate performance when exposed to fire from each side separately. (see [Approved Document B volume 1](#) table B3 and paragraph C3.)

This requirement is repeated in BS 9999:2017.

BS 9999:2017, Fire Safety In the design, management and use of buildings, Code of Practice

Clause 32.1 covers fire doors and Sub-clause 32.1.3 states that, unless stated otherwise, e.g. lift doors, fire doors should provide a fire resistance from each side.

Certifire Certification

Certifire certificates state that, subject to the conditions of the certificate and data sheet, certified doors would be expected to meet the relevant requirements of BS 9999, i.e. they would achieve the stated period of fire resistance when subjected to a fire on either side.

Direct Field of Application from both National and European classifications.

BS 476-22:1987, Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction.

Clauses 6.2.1 (fully insulated doorsets), 7.2.1 (partially insulated doorsets) and 8.2.1 (uninsulated doorsets) cover the number of specimens. And states that doorsets shall be tested from both sides, i.e. open towards and away from the furnace, unless the doorset assembly, including the hardware, is entirely or unless the weakest direction can be clearly identified.

BS EN 1634-1:2014+A1:2018, Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Fire resistance test for door and shutter assemblies and openable windows

Clause 13.4.2 states that where door leaves are symmetrical (not including the edge conditions, i.e. locks, rebates etc.) hinged or pivoted timber leaves in a timber frame may be tested opening into the furnace. (see also table 2 – Type of doorset and direction to be tested to cover opposite direction)

MHCLG testing of timber fire doors from October 2018 to March 2019

Information on this test programme can be found [here](#)

Of the 25 tests undertaken, 5 were either the same time in each direction or the test was stopped before failure had occurred, 16 showed a worse performance opening into the furnace when compared to the performance opening away from the furnace and 4 tests showed a better performance opening towards the furnace. Of the tests showing a better performance opening towards the furnace all these showed a period of resistance of 40 minutes or better, when the target was 30 minutes, with the average time for the door opening into the furnace being 48 minutes and the average time when opening away from the furnace 44 minutes. It is considered that these doors were performing in an unusual way due to the large over runs and do not contradict the rules in BS 476-22 and BS EN 1634-1.