

# Fire or Smoke Resisting Industrial Door FAQs

## Introduction

Since November 2019, the legislation affecting the manufacture and supply of fire/smoke resisting industrial doors within the scope of EN 13241 has changed:

- doors for vehicle access, and
- vertically acting shutters over pedestrian access areas

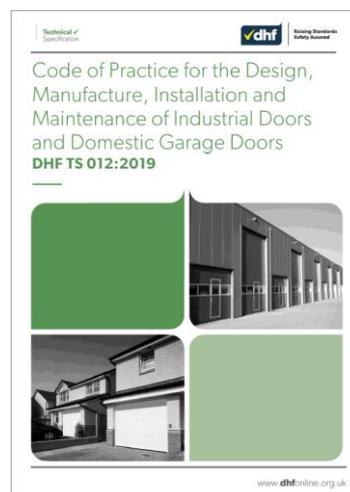
Doors within the scope of EN 13241 that do not have fire/smoke resisting properties have been required to be CE marked under the Construction Products Regulation (CPR) since July 2013; DHF TS 012:2019 explains the requirements for compliance. In late 2016, the scope of EN 13241 was altered to include fire/smoke resisting doors that had previously been excluded, allowing a three-year coexistence period during which CE marking of these doors was voluntary. The coexistence period ended on 1<sup>st</sup> November 2019 and CE marking is now obligatory.

The November 2019 change brings doors within scope of EN 13241 with fire/smoke resisting properties into the same legislative framework as ordinary doors within its scope, albeit with a higher level of assessment and verification.

The CPR now applies to fire/smoke resisting doors within the scope of EN 13241 and means that type testing, factory production control assessment and product certification for fire/smoke-related characteristics must now be conducted using the services of a notified product certification body. This is because EN 16034 requires that Assessment & Verification of Constancy of Performance (AVCP) for the fire/smoke essential characteristics must be achieved using system 1. The non-fire/smoke characteristics of fire/smoke resisting doors are now the same as for doors without fire/smoke resisting characteristics. Verification of these characteristics must be conducted using a mix of notified test laboratory testing under system 3 and manufacturer testing under system 4, depending on the individual characteristic, as per Annex ZA of EN 13241; DHF TS 012:2019 explains the requirements for compliance of these characteristics.

This legislative change occurs because both standards that cover these products: EN 13241:2003 + A2:2016 (structural, mechanical and safety in use properties) and EN 16034:2014 (fire and smoke resisting properties) are now fully harmonised under the CPR. Assessment & verification of constancy of performance of the fire/smoke resisting properties must now be conducted according to EN 16034:2014, based of testing according to EN 1634-1:2014+A1:2018, under the control of a notified product certification body.

DHF has already issued a guidance document on this subject: “Changes to CE marking fire & smoke resisting industrial doors”; these FAQs should be used in conjunction with that document and DHF TS 012:2019.



Please also be aware that CE marking of all ‘powered’ fire resisting doors has been mandatory, under the Machinery Directive (Supply of Machinery Safety Regulations in the UK), since 1995.

The new CPR requirement is in addition to, and does not replace, the existing Machinery Directive compliance CE marking requirement. DHF TS 012:2019 explains MD compliance.

These FAQs do not apply to fire/smoke resisting curtains or hinged pedestrian fire/smoke resisting doors.

1. What is the difference between a notified test laboratory needed for system 3 Assessment & Verification of Constancy of Performance (AVCP) and a notified product certification body needed for system 1 AVCP?

A 'notified test laboratory' simply conducts tests and issues a report, a 'notified product certification body' considers not just the testing, but also the extended application of the test results and overall certification of the products covered.

2. What is the difference between existing certification schemes and certification for CE marking?

Certification has been widely available and used under a variety of private certification schemes in the past; brands such as BM TRADA, LPCB, IFC, UL and CERTIFIRE are prominent in the fire industry. Private schemes like this have their own rules and certification bodies can, if they wish, seek accreditation from the UK Accreditation Service (UKAS). Private certification schemes always were, and still are, purely voluntary, and may offer additional features not found in the new legally required CE certification.

Certification for CE marking under the CPR, on the other hand, is now a statutory requirement for fire/smoke resisting doors within the scope of EN 13241. A notified product certification body is a body which has been notified by the relevant national government to the European Commission; in the UK, this is handled by UKAS. In this case, the involvement of UKAS is not voluntary - it is a requirement which must be fulfilled before the relevant work can be undertaken. A "notified product certification body" is simply a notified body which is authorised to carry out product certification as required by the CPR under AVCP system 1.

3. If a manufacturer has certification based on old BS 476 tests, did that necessarily end on 1st November or will they need to re-test and re-certify in order to legally place their products on the market under the new CE marking legislation?

Any certification based on old BS 476 tests will be a private certification scheme and therefore not connected with the new CE marking legislation. New testing under EN 1634-1 and certification for CE marking is now required.

It may be that some private certification schemes (including those based on BS 476 tests) are respected in non-EU overseas markets, like the Gulf states and Hong Kong; this may grant such schemes an extended life in these markets.

4. If a manufacturer has had their product tested to older versions of EN 1634-1 in the past, will the notified product certification body accept the test report as evidence for certification under the new CE marking rules?

It is unlikely, but only the notified product certification body can decide this.

5. Can manufacturers of fire/smoke resisting doors who do not have EN 16034 CE certification from a notified product certification body continue to supply doors?

It is illegal to place a fire/smoke resisting door falling within the scope of EN 13241 on the market without a DoP and CE mark and certification from a notified product certification body.

6. Can installation companies continue to install fire/smoke resisting doors within the scope of EN 13241 that do not have EN 16034 CE certification from a notified product certification body?

Distributors, as well as manufacturers, have duties under CPR. Article 14.2 states: "Before making a construction product available on the market, distributors shall ensure that the product, where required, bears the CE marking and is accompanied by the documents required under this Regulation"; to do so without this in place would be illegal.

7. Where manufacturers have in the past been operating on a fire assessment to supply doors for fixing to timber/stud wall but since 1st November their certification body will no longer certify this, how should they proceed?

The assessment previously used by DHF members was based on testing to EN 1634-1:2000, which is now an obsolete version of the European fire test standard. If the notified product certification body concerned will not accept this as evidence on which to base their extended application (EXAP) report, then re-testing will be required. Although the product could still have a valid CE mark in relation to installation in masonry, in the absence of any stud wall certification, the instructions would have to make it clear that the intended use was limited accordingly. We suspect that any attempt by a manufacturer to make claims which went beyond the scope of the CE certification could fall foul of CPR Article 4.2.

8. Where installation companies have in the past been operating on a manufacturer's fire assessment fix to timber/stud wall, but this is no longer covered by the manufacturer's CE certification, how should they proceed?

Anyone installing or using a product in an application for which no valid evidence is available clearly runs the risk of being prosecuted under the building regulations or possibly the FSO 2005 according to the circumstances. Whether it would be a defence to quote from the old, pre-CE, evidence is debatable.

9. Can a notified product certification body continue to certify a door tested to the old BS 476?

Evidence from testing to the old BS 476 has never been valid for the purpose of CE certification. Private certification schemes are subject to their own rules, some at least require CE compliance (where relevant) as a condition of certification, in which case the answer for fire shutters sold in the EU would be no. Manufacturers and distributors should however take note of FAQ 2.

10. What is the difference between the essential characteristics: ability to release, self-closing, durability of ability to release, and durability of self-closing?

All of these essential characteristics can be declared as 'no performance determined' (NPD), depending on the intended use of the door:

- Ability to release: the door's ability to start to close (mandatory for doors that will be held open)
- Self-closing: the door's ability to close fully (mandatory for doors that will be held open)
- Durability of ability to release: the door's ability to release on loss of power and under fault conditions (see FAQ 11 below)
- Durability of self-closing: the door's ability to self-close for a declared number of cycles (mandatory for doors that will be held open)

11. Can the essential characteristic 'durability of ability to release' be declared as no performance determined (NPD)?

NPD is a valid declaration for 'durability of ability to release' under the CPR harmonised standard, EN 16034. So, the fire shutter manufacturer could not face prosecution for a breach of CPR by declaring NPD.

The only debatable point is whether the product is acceptable as a "self-closing" fire door, as required by building regulations. All DHF can say here is that:

- this particular building regulations requirement has not changed in any way for many years
- the existing designs of fire-resisting rolling shutters have been supplied as being "self-closing" for many years
- DHF is not aware of any objections having been raised by the authorities to this state of affairs

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Custom and practice are therefore on the side of continuing to accept these products as compliant with building regulations, in line with long-accepted practice in the industry. The products have not suddenly become more dangerous; the most that can be said is that we are being more up-front about a potential problem which has always existed, ever since tubular motors were first used to close fire shutters.

Against this is the argument that, since it is perfectly possible to design a fire shutter which could legitimately declare “release maintained” against “durability of ability to release”, why not do so?

12. Where a notified product certification body indicate that they will not/cannot test for ‘durability of ability to release’ what is the effect on the manufacturer?

Either the manufacturer must find an alternative notified certification body, or the door will have NPD against that essential characteristic on its DOP, see also FAQ 11 above.

13. In regard to the non-fire/smoke characteristics of fire/smoke resisting doors, what level of safety is acceptable?

In normal day to day use, fire resisting doors need all the same levels of safety as any other door. This will include safe opening (fall back protection) and operating force. The safety devices that are to be used on the door must have been present on the door during the fire tests. As safe edges and light grids are unlikely to fare well during fire testing, most doors will need to be operated using hold-to-run. Inherent force limitation is a possibility but not currently popular. For more detail on non-fire/smoke characteristics, see section 4 of DHF TS 012:2019.

14. Should fire/smoke resisting doors be fitting an audio-visual warning system as standard to provide a warning for the automatic closing of the shutter, or could this be considered an optional extra?

This is a matter of local risk assessment but, in most cases, as the door will close without warning, yes. The risk assessment is not optional, and the installer will need to be able to justify the specification as installed.

15. Do fire/smoke resisting doors need to be safe during closing under fire/smoke conditions?

Currently, the level of safety that is required during closing under fire/smoke conditions is not deemed to be the same as that required during normal day to day use. Where a door is closed by a local heat sensor (eg fusible link), it is fair to assume that all possibility of life would have passed before the door closes. If the shutter was to deploy in the event of a fault condition, it would become potentially dangerous. Hence, careful attention must be paid to maintenance of the heat sensor and any associated linkage, for example most fusible link manufacturers specify annual or bi-annual replacement.

16. What are the maintenance requirements for fire/smoke resisting doors?

The door manufacturer is legally required to provide detailed maintenance instructions with the door. If the door is then not correctly maintained, the owner/user is placing themselves and occupants at risk and are almost certainly at risk of prosecution. Under the Fire Safety Order 2005, there are routine inspections and tests to be completed by the client, and other inspections and tests to be undertaken by trained operatives.

17. Are spring balanced manual fire shutters with drop bars safe?

New doors must have fall-back protection.

DHF advises that older existing doors that are held open permanently and only close under fire conditions, but do not have fall back protection, should be rated as ‘requiring improvement’ on the basis that their infrequent use places them at a much reduced risk of falling back. There is however a risk of false deployment based on a fault so effective maintenance will be key.

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## 18. Can a vertically acting door be placed over a fire escape route?

For new buildings and renovation projects, the answer to this is based on official guidance on compliance advice:

1. England and Wales (Approved Document B) fire shutters over escape routes should only be operated by a heat sensor at the door (eg fusible link), the theory being that the shutter will only close when the temperature at the door has reached a level where all possibility of life has been lost. The shutter is however permitted to close partially for the control of smoke.
2. Scotland (Technical Handbook section 2) shutters are not permitted on escape routes unless they are a security shutter over a shop front and do not close automatically in the event of fire.
3. Northern Ireland (Technical Booklet E) does not mention shutters on escape routes specifically but does place limitations on the use of automatic doors and turnstiles. DHF recommends contacting building control before placing a shutter over an escape route in NI.

For existing buildings, the answer is based on official guidance relating to the Regulatory Reform (Fire Safety) Order 2005 - (England & Wales):

1. All doors on escape routes should open in the direction of escape and ideally be fitted with a vision panel. This is particularly important where more than 60 people will use them or if they provide an exit from an area of high fire risk (eg a kitchen).
2. Loading or goods delivery doors, rolling, folding, sliding or up and over, are not normally suitable as a final exit. However, they may be suitable for escape from areas of normal risk by small numbers of staff as long as they are not likely to be obstructed and can easily and immediately be opened manually, even if the door is normally power-operated, and the staff are familiar with the escape route.
3. Whilst a building is not occupied, vertically acting doors can be used as a final security measure, providing building management procedures are in place to ensure they are never closed until the building is empty.
4. It may be possible to reduce the number of exit routes available when the building has reduced occupancy (eg security staff or during opening up and closing) providing all staff that are present are safe and fully aware of the restrictions in place and their effect on emergency egress during these times.

Northern Ireland offers very similar guidance to England and Wales in support of the Fire and Rescue Services (NI) Order 2006 and the Fire Safety Regulations (NI) 2010. Guidance supporting the Fire (Scotland) Act 2005 and the Fire Safety (Scotland) Regulations 2006 is significantly different in its arrangement and can be downloaded from the address given below.

**Guidance on fire safety duties of owners and managers of non-domestic premises is available as follows:**

England and Wales - Regulatory Reform (Fire Safety) Order 2005: <https://www.gov.uk/government/collections/fire-safety-law-and-guidance-documents-for-business>

Scotland - Fire (Scotland) Act 2005 and Fire Safety (Scotland) Regulations 2006: <https://www.firescotland.gov.uk/your-safety/for-businesses/your-duties.aspx>

Fire and Rescue Services (NI) Order 2006 and Fire Safety Regulations (NI) 2010: <https://www.nifrs.org/business-safety-advice/fire-safety-guides/>



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