

# Specifying CE Marked Doorsets

**Part 1** - an introduction for building professionals

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## What happens today?

Traditionally the specifier has the option of:

1. choosing a complete doorset or a doorset kit of parts from a single source for expert assembly into a custom made doorset on-site; or
2. choosing individual door components from various suppliers for on-site assembly

## What happened in 2013 and what were the implications for doorset specifiers?

On 1 July 2013 it became an offence to place a construction product on the market without a CE mark if it is covered by a harmonised standard. Where the relevant harmonised standard is already in force (which is the case for external doorsets without fire characteristics) this means that all products entering the supply chain must carry the CE mark. More recently published standards are still in a transition period where CE marking is voluntary (this applies to external fire-resisting doors) and internal doors cannot yet be CE marked because the standard has not been published. See the second table on page 3 for further details.

## What is a harmonised standard?

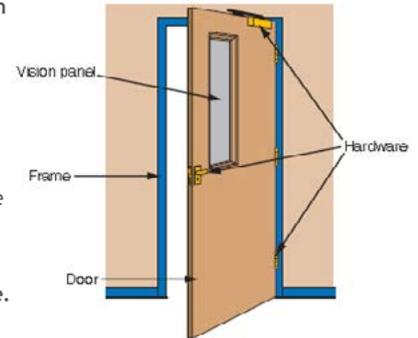
A harmonised standard is a European standard that is recognised by the European Commission as a basis for compliance with legislation.

## What is the definition of a CE marked doorset?

- **A doorset must be complete**  
A doorset comprises a door leaf or leaves, and frame, including any side panel(s), vision panel(s), flush over panel(s), transom panel(s) and/or glazing together with any seals and hardware essential for performance of the function for which the doorset is CE marked, which may vary from doorset type to doorset type.

- **A doorset must be from a single source**  
The doorset is placed on the market by one legal entity who takes the responsibility for the performance of the doorset and the application of the CE mark.
- **A doorset is CE marked by the single source the FIRST time it is supplied for use or distribution within the EU**

This could be when it leaves the factory as a kit of parts or as a fully or partly assembled doorset. It may also be when the doorset is assembled on site by a sub-contractor from parts purchased separately under his responsibility as a **single source**.



## Supply of doorsets

No CE marking can take place if the doorset is not "supplied". For example, if building owner purchases components from separate sources which are then used to create a doorset on site, the completed doorset is not intended to be "supplied" to anyone and there can be no CE marking. (This still applies even if the building in which the door is installed is subsequently sold; the door is then only an incidental part of a larger transaction.)

**Examples:**

Scenario	Responsibility for CE marking	CE mark required?	dhf preferred option?
A manufacturer supplies complete doorsets, either fully assembled or in kit form ready for installation	The manufacturer is responsible for CE marking	YES	YES
A distributor buys complete doorsets or door leaves, frames and hardware from various sources and sells doorsets ready for installation under the distributor's own name	The distributor is responsible for CE marking	YES	YES
A joinery subcontractor buys components from various sources, prepares them on site, assembles them and then installs them	The joinery subcontractor is responsible for CE marking the completed doorsets, which are supplied to the main contractor or end user	YES	NO*
A builder of a new development buys components from various sources which are assembled on site and installed by the builder or by a labour-only subcontractor	There can be no CE marking because no supply of a complete doorset has taken place	NO	NO*

\*These options are not recommended because they do not confer the advantages of factory prepared doorsets (see page 4)

## What are the standards with which CE marked doorsets will need to comply?

Scope	Harmonised standard	CE marking possible from	CE marking compulsory from
<b>External doorsets</b> (without CE marked fire or smoke resistance characteristics)	EN 14351-1: 2006 +A2 2016	February 2007	July 2013
<b>External doorsets</b> (with CE marked fire or smoke resistance characteristics)	EN 14351-1: 2006 +A2 2016 and EN 16034: 2014	1st November 2016	1st November 2019
<b>Internal doorsets</b> (without CE marked fire or smoke resistance characteristics)	prEN 14351-2	Jan 2018 at earliest	1st November 2019
<b>Internal doorsets</b> (with CE marked fire or smoke resistance characteristics)	prEN 14351-2 and EN 16034: 2014	Jan 2018 at earliest	1st November 2019

Note: A prEN is a well advanced draft European standard that has been issued for public comment

These standards form a unified framework under which doorsets can be classified in accordance with their performance characteristics against a series of supporting EN test standards listed in the above table. This level playing field will make the task of comparing doorsets with each other and with the client's requirements far more open and transparent. There are two categories in each of the product standards:

**CE marked characteristics**

These are mandated characteristics\* for CE marking such as watertightness, resistance to wind load, impact resistance, acoustic performance, thermal transmittance, air permeability, resistance to fire and smoke leakage.

**Voluntary characteristics**

These are additional tests which the manufacturer may voluntarily undertake to demonstrate additional performance characteristics of the doorset

which the specifier may wish to choose, such as burglary resistance, bullet resistance and explosion resistance.

\* It should be noted that the manufacturer has the option of making a "no performance determined" declaration against certain performance characteristics as indicated in the individual standards. It is therefore advisable to check all CE marking characteristics claimed in the supplier's supporting documents when comparing doorsets with each other.

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## Enhanced performance of CE marked doorsets

When testing doorsets to satisfy the minimum requirements for CE marking, the manufacturer may opt to extend the scope of the tests to higher performance levels to demonstrate the **enhanced strength and durability capabilities of the doorsets** as set down in the **dhf** Standard TS 006:2011 Enhanced performance specification for doorsets

## What are the benefits to the specifier in choosing factory prepared CE marked doorsets?

- A doorset is a complete unit designed and engineered to meet specific performance requirements and is manufactured to exacting and consistent standards
- It can be delivered on-site as a completely pre-assembled unit for installation into the building, or it can be delivered as a complete factory-prepared doorset kit of parts from a single source ready for final on-site assembly
- A CE marked doorset enables the specifier to determine the performance requirements for an intended application, as the documentation will be straightforward and unambiguous, enabling the specifier to choose the right doorset for the purpose
- Quality control - The doorset supplier has complete control over the quality and compatibility of all individual components and materials comprising the completed doorset, so ensuring dependable and consistent performance standards
- The specifier is assured that the single source alone is responsible and accountable for the performance of the entire doorset assembly
- Factory preparation of the doorset ensures more accurate, speedy and precise installation on-site
- Factory prepared doorsets reduce the potential for on-site health and safety issues concerning assembly and door ironmongery preparation
- The specifier, client and contractor benefit from economies in the supply chain thanks to fewer purchasing transactions
- Doorsets, particularly pre-assembled doorsets, mean there is less chance of loss or pilferage on site
- Specifying a doorset is the "greener" option - much less waste is generated on-site when compared to on-site fabrication of individual door assemblies
- CE marked doorsets are likely to become the default requirement in larger building projects such as schools, hospitals, public buildings and large residential developments

## Installation of CE marked doorsets

A CE marked doorset when fitted in place may not meet its claimed performance characteristics if installed incorrectly. Whilst not part of CE marking requirements, **dhf** strongly recommends that CE marked doorsets are installed by trained installers and that fire resisting CE marked doorsets are installed by third-party certified installers.

## Declaration of Performance of CE marked doorsets

The single source (manufacturer or supplier) of CE marked doorsets is required to issue a Declaration of Performance in a prescribed format. This covers the mandated characteristics. The purpose of this document is to enable easy comparison of performance, as shown in the example on page 7 for external doorsets.

Under CE marking regulations the single source shall provide sufficient information to ensure the traceability of the product (e.g. by means of product codes) giving the link between the product, the manufacturer and the production. This information shall either be contained on a product label or detailed in accompanying documents or in the manufacturer's published technical specification(s).

Relevant designations of characteristics as well as information about intended use, handling, installation, maintenance and care shall either be contained on a product label or detailed in accompanying documents or in the manufacturer's published technical specification(s).

		<b>16</b>
		Ashby Steel Doors (1960) Ltd, Anytown
		XDOR F-800 series doorset
Essential characteristic	Declared performance	Harmonised standard
Watertightness	Class 3	EN 14351-1:2006 + A2:2016
Dangerous substances	None	
Resistance to wind load	Class 5	
Impact resistance	Class 2	
Height	2000 mm	
Thermal transmittance	1.7 W/m <sup>2</sup> K	
Radiation properties	NPD	
Air permeability	Class 3	
Resistance to fire (for fire compartmentation uses): E:	120	EN 16034:2014 + A1:2016
Smoke control	S <sub>200</sub>	
Ability to release	Released	
Self-closing	C	
Durability of ability to release	Release maintained	
Durability of self-closing: • Against degradation (cycle testing): • Against ageing (corrosion):	2 achieved	
PDQ Certification (UK) (Notified body 9913) issued a certificate of constancy of performance and carried out type testing and calculation. Intended use: Communication in domestic and commercial locations; fire and/or smoke compartmentation and/or escape routes.		

### Example of CE marked doorset label

**dhf** recommend the labelling of doorsets information in any form about performance in relation to mandated essential characteristics may be provided only if stated in the Declaration of Performance as shown on page 7.

## Performance requirements for CE marked external doorsets

As of 1st July 2013 external doorsets, without fire and/or smoke characteristics, must be CE marked in compliance with EN 14351- 1:2006+A2:2016. This standard forms a unified framework under which external doorsets can be classified in accordance with their performance characteristics against a series of supporting EN test standards listed in the harmonised document.

This level playing field makes the task of comparing doorsets with each other

and with the client's requirements far more open and transparent. There are two categories in this product standard for external doorsets - mandated CE marked characteristics which will be listed in the Declaration of Performance of the doorset, and voluntary characteristics:

It should be noted that where permitted by local Building Regulations the manufacturer has the option of making a "no performance determined (npd)" declaration against certain performance characteristics as indicated in the individual standards. It is therefore essential to check all CE marking characteristics claimed in the supplier's Declaration of Performance when comparing doorsets with each other.

### Mandated CE marked characteristics to be listed in the Declaration of Performance:

External doorsets without resistance to fire and/or smoke control characteristics

Essential characteristic	Classification standard Describes performance classes for the product	Test or calculation standard	Comment
Resistance to wind load	EN 12210	EN 12211	
Watertightness	EN 12208	EN 1027	
Air permeability	EN 12207	EN 1026	
Thermal transmittance	U value declared by manufacturer	EN ISO 10077-1 or EN ISO 10077-1 and EN ISO 10077-2 or EN 12567-1	
Acoustic performance	Db value declared by manufacturer	ISO 140-3 ISO 717-1	
Impact resistance	Building hardware - Electrically powered hold-open devices for swing doors - Requirements and test methods	Only products intended for use on fire-resisting doors	Doors with glazing only
Load bearing capacity of safety devices	Threshold value	EN 948	If relevant
Ability to release	Installed hardware shall comply with EN 1935, EN 179, EN 1125, and prEN 13637		Locked doors on escape routes only
Dangerous substances	Declared by manufacturer in accordance with legislation in country of destination		Indoor impact only
Radiation properties	Declared value	EN 410 EN 13363-1 EN 13363-2	Glazed panels only
Height	Declared value		

External Doorsets with additional resistance to fire and/or smoke control characteristics to be listed in the DoP

Essential characteristic	Classification standard Describes performance classes for the product	Test or calculation standard	Comment
Resistance to fire	EN 13501-2	EN 1634-1	
Smoke control	EN 13501-2	EN 1634-3	
Ability to release			
Self-closing	EN 13501-2	EN 1634-1	Pre-test conditioning and cycling
Durability of ability to release		EN 1155 or EN 14637	
Durability of self-closing against degradation	EN 13501-2		Pre-test conditioning and cycling
Durability of self-closing against ageing (corrosion)		Hardware complies with relevant clauses of the applicable building hardware standard	

## Declaration of Performance of CE marked external doorsets

The single source (manufacturer or supplier) of CE marked external doorsets is required to issue a Declaration of Performance in a prescribed format. This covers the mandated characteristics listed in page 6. The purpose of this document is to enable easy comparison of performance, as shown in the example below of a DoP for an external doorset with fire resistance characteristics:

Example of a CE marked external doorset label is shown on page 5.

The **dhf** recommends the labelling of doorsets

**Regulation (EU) 305/2011**

**Declaration of Performance**

**No:** XDOR F-800 series

1. **Unique identification code of the product type:** XDOR F-800 series
2. **Intended use/es:** Communication in domestic and commercial locations; fire and/or smoke compartmentation and/or escape routes.
3. **Manufacturer:** Ashby Steel Doors (1960) Ltd
4. **System/s of AVCP:** System 1 and 3
5.
  - a. **Harmonised standards:** EN 14351-1:2006 + A2:2016; EN 16034:2014 + A1:2016
  - b. **Notified body/ies:** PDQ Certification (UK) (Notified body 9913) issued a certificate of constancy of performance and carried out type testing and calculation
6. **Declared performance**

Essential Characteristic	Declared performance	Harmonised standard
Watertightness	Class 3	EN 14351-1:2006 + A2:2016
Dangerous substances	None	
Resistance to wind load	Class 5	
Impact resistance	Class 2	
Height	2000 mm	
Acoustic performance	NPD	
Thermal transmittance	1.7 W/m <sup>2</sup> K	
Radiation properties	NPD	
Air permeability	Class 3	
Resistance to fire (for fire compartmentation uses): E: EI <sub>1</sub> : EI <sub>2</sub> : EW:	120 NPD NPD NPD	
Smoke control	S <sub>200</sub>	
Ability to release	Released	
Self-closing	C	
Durability of ability to release	Release maintained	
Durability of self-closing: • Against degradation (cycle testing): • Against ageing (corrosion):	2 achieved	

7. The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Ian M Somebody (Managing Director)

At Anytown on 5 November 2016    Signature: ***I AM Somebody***

Example of a Declaration of Performance

Information in any form about performance in relation to mandated essential characteristics may be provided only if specified in the Declaration of Performance. For example a thermal transmittance (U value) different to that stated on the DoP and label cannot be claimed in other technical documents issued by the single source.

**Voluntary characteristics - not listed in the Declaration of Performance:**

Characteristic	Classification standard Describes performance classes for the product	Test or calculation standard
Resistance to repeated opening and closing	EN 12400	EN 1191
Mechanical strength	EN 1192	EN 947 EN 948 EN 949 EN 950
Operating forces	EN 12217	EN 12046-2
Burglar resistance	ENV 1627	ENV 1628 ENV 1629 ENV 1630
Bullet resistance	EN 1522	EN 1523
Explosion resistance	EN 13123-1 prEN 13123-2	EN 13124-1 prEN 13124-2
Ventilation	Declared values	EN 948
Climatic behaviour	EN 12219	EN 1121

## Other performance characteristics of external doorsets

The CE marked doorset may have performance characteristics in addition to those listed in the Declaration of Performance. These may be from those listed under voluntary characteristics or may be characteristics meeting the performance requirements of other independent bodies - for example security, and strength and durability capabilities set down in the **dhf** Standard TS 006:2011 'Enhanced performance specifications for doorsets'. These shall be stated separately from the Declaration of Performance or CE mark and may include third party certification marks which cannot be confused with CE marks. **dhf** support the third-party certification of products.

**NOTE:** BS 6375: 2009, parts 1, 2 and 3 provide useful guidance on the selection and specification of external doorsets to meet varying UK climate conditions.

## CE marked external doorsets with fire resisting and smoke control characteristics

On 1st November 2016 it became possible to voluntary CE mark external doorsets for resistance to fire and/or smoke characteristics in accordance with harmonised standard EN 16034:2014

It should be noted that for CE marking purposes, EN 16034 cannot be used alone and the performance must be declared in the DoP and CE mark label in conjunction with characteristics listed in the product standard EN 14351-1 (external pedestrian doorsets and windows), as shown in the example DoP on page 7.

The period of co-existence lasts until 31st October 2019 during which external doorsets complying with EN 14351-1 may have non-CE marked fire and smoke performance test evidence in order to satisfy national building regulations. Such doorsets will have been fire tested to BS 476 Part 22 or to EN 1634-1 and may have third-party fire certification as recommended by **dhf**.

In such circumstances the fire performance of the doorset must not be included in the Declaration of Performance or the CE marked label and must be stated separately. Third-party certification labels must not be confused with CE marked labels.

CE marking of doorsets to EN 16034 is compulsory from 1st November 2019.

This publication Part 1 is the first of a series titled Specifying CE marked doorsets published by **dhf**.

Other documents in the series are:

Part 2M: External metal doorsets (without resistance to fire and/or smoke leakage characteristics)

CE marked external doorsets - A guide for construction site management

Others in the series will cover CE marked internal doorsets and CE marked fire resisting doorsets when harmonised standards for these products are published.

These publications are available on the **dhf** website: [www.dhfonline.org.uk](http://www.dhfonline.org.uk)

## dhf

**dhf** is able to arrange confidential help and advice should you require assistance with any of the topics covered in this document.

**dhf** is working closely with a number of groups to promote a wider understanding of the benefits of CE marking of doors, doorsets and components and the implications of current and future legislation.

These groups consist of:

- Building professionals including specifiers, architects and contractors
- Housebuilders
- Enforcement authorities including Trading Standards & Building Control
- Trade associations in the building and construction sector

For more information visit [www.dhfonline.org.uk](http://www.dhfonline.org.uk) where a number of best practice guides, technical guides, and codes of practice are available.





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