CE Marking Fire Resisting Doorsets Explained
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Fire Resisting Doorsets - Key Terms

- Doorset
- Door assembly
- Doorset manufacturer
- Doorset assembler
- Systems House
- Notified Body
Fire Resisting Doorsets - Key Terms

- Doorset - complete, fully machined, no further site work required, supplied from one legal entity, fire and/or smoke capability
Doorset

- Door leaf
- Door frame/architrave
- Side screen / fan light
- Intumescent Seals
- Smoke seals
- Hardware
- Door closer
- Glass and glazing system
- Thresholds

- Under the responsibility of a single supplier
Fire Resisting Doorsets - Key Terms

• Door assembly - frame, door leaf or leaves and their necessary hardware supplied as individual component parts, usually un-machined, and placed on the market by more than one legal entity
Door assemblies

- NOT under the responsibility of a single supplier
Fire Resisting Doorsets - Key Terms

- Doorset manufacturer - A manufacturer of a complete doorset that has generated their own ITT and places the product on the market.
Fire Resisting Doorsets - Key Terms

• Doorset assembler - A manufacturer of a complete doorset that uses cascaded manufacturing information, ITT, DIAPs, EXAPs and Classification Reports from a Systems House in order to place a product on the market.
Fire Resisting Doorsets - Key Terms

- Systems House - A company that has tested a system that is intended to be assembled by a Doorset Assembler, with ITT provided for use by the Doorset Assembler for the purpose of CE Marking
Fire Resisting Doorsets - Key Terms

Notified Product Certification Body - An independent organisation notified to undertake constancy of performance certification tasks under AVCP systems 1+ and 1. (BS EN 16034 is a product standard at AVCP system 1)

Notified Test Laboratory - An independent organisation notified to measure, examine, test, calculate or otherwise assess the performance of construction products. (This may be for testing in accordance with BS EN 1634-1, BSEN 1634-3 or EN 1191 and for the preparation of extended application reports in accordance with BS EN 15725)
Fire Resisting Doorsets - Key Fact 1

BS EN 16034 is now published as a harmonised standard and it should be possible to CE mark fire and/or smoke doorsets in 2015.
A coexistence period will exist where complete fire doorsets can be CE marked or continue to be supplied under the current national system.
Fire Resisting Doorsets - Key Fact 3

After the coexistence period, all complete fire doorsets will have to be CE marked
Fire Resisting Doorsets - Key Fact 4

The EN 16034 standard only applies to complete fire doorsets.
Fire Resisting Doorsets - Key Fact 5

Door assemblies cannot be CE marked under BS EN 16034
Fire Resisting Doorsets - Key Fact 6

CE Marking is not 3rd party certification and does not replace Q-Mark
Fire Resisting Doorsets - Key Fact 7

Essential characteristics covered by EN 16034:

- Integrity - $E$
- Insulation - $I_1$
- Insulation - $I_2$
- Radiant heat flux - $W$
- Smoke leakage - $S_a$
- Smoke leakage - $S_{200}$
- Durability of self closing (number of cycles) - $C_0, C_1, C_2, C_3, C_4, C_5$
- Durability of self closing - ‘Achieved’
- Ability to release - ‘Released’
- Durability of ability to release - ‘Release maintained’
A product family is a product with defined limits of variability of the product parameters for which the fire performance remains unchanged (i.e. does not get worse). The allowable changes in composition, materials and constructions must be within the parameters set out in the relevant EXAP standards.
Product Family - EIW 30 Sa C3

Test programme led by the performance requirement

Product Family can be classified with lower performance (e.g. E 30 Sa)

Product must still be constructed to meet tested performance

Product Range consists of one Product Family
Product Family - E 30 Sa

Test programme led by the performance requirement

Product Family may be able to provide higher performance than claimed

Product cannot be classified with performance higher than the supporting ITT

Product Range consists of one Product Family
Product Families

Product Family 1 - E 30 Sa
Product Family 2 - EIW 30 Sa C3

Test according to performance claims required for each Product Family

Product Range consists of two Product Families

Two sets of ITT to be generated (including EXAPs and Classification Reports)
Product Families will therefore be influenced by commercial decisions:

- Test for highest possible classification to claim as many performances as possible - likely to be over engineered for lower claims

- Test for as many design parameters as possible with the same performance claim for all - likely to be constructing product with higher performance than that being claimed

- A Product Range can consist of more than one Product Family

- Understand your market, understand the claims of performance, define Product Families accordingly
What does this mean for me?

During co-existence period ‘business as usual’ UNLESS you are asked for CE marked doorsets

After co-existence period CE marking of complete fire doorsets will be mandatory

Alternative routes to market will continue to exist BUT this will be market led
Are there similarities between CE marking and the current system?

British and European test standards have co-existed in Building Regulations for many years.

For manufacturers that are already Q-Mark certified the process of applying the CE mark to fire doorsets should feel familiar.

Performance requirements will still be based on building regulations and project requirements.
### Table B1 Provisions for fire doors

<table>
<thead>
<tr>
<th>Position of door</th>
<th>FD30S Current standards</th>
<th>E30Sa Current standards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Fire resisting to BS 476: Part 22</td>
<td>1. Fire resisting to BS EN 1634-1</td>
</tr>
<tr>
<td></td>
<td>2. Smoke control to BS 476: Part 31.1</td>
<td>2. Smoke control to BS EN 1634-3</td>
</tr>
</tbody>
</table>
What key differences are there between CE marking and the current system?

- Terminology and standards will seem unfamiliar.
- The extension of tested scope is more prescriptive.
- Formalised product sampling process prior to testing.
- Formalised definition of Product Families and required classifications.
What key differences are there between CE marking and the current system?

Development
- Product range that needs to be proven for fire resistance (alternative unknown options expected)
- Test programme reverse engineered (more flexibility)

Testing
- Test to cover product range for X minutes fire resistance

Assessment
- Global assessment written that allows design variations to meet different performance requirements i.e. Integrity, insulation and smoke control
What key differences are there between CE marking and the current system?

**Development**
- Product Range that needs to be proven for fire resistance (clearly defined)
- Test programme reverse engineered (more prescriptive - uses DIAP and EXAP)
- Required performance(s) must be declared (Product Families)

**Testing**
- Sampling at factory required
- Test to cover Product Range (Product Families) for X minutes fire resistance
- Results dictate maximum possible performance classification

**EXAP and Classification**
- EXAP(s) written to cover defined Product Range (Product Families) and performance classification(s)
- Classification Report(s) written for Product Range (Product Families)
How do I CE mark my doorsets?

Step 1: I.D. Product Range

Step 2: I.D. Performance classification

Step 3: Reverse engineer test programme

Step 4: Ensure raw material traceability is in place

Step 5: Carry out ITT

Step 6: Write EXAPs & CRs

Step 7: Draw up product technical file

Step 8: Arrange for NB to inspect FPC

Step 9: Draw up EC DOP

Step 10: Provide adequate info for installation
Step 1: I.D. Product Range

Configurations

Glazing

Finishes

Hardware

Dimensions
Case Study - Step 2

Manufacturer: Doors 4 EU Ltd

- 30 minute fire doors
- Integrity performance to be claimed
- Smoke control performance to be claimed
- No tested durability performance claimed

For all of the EUROCORE product range

Required performance classification:

E 30 Sa

Step 2: I.D. Performance classification

Integrity
Insulation
Smoke control
Durability
Step 3: Reverse engineer test programme.
NB can assist in devising test programme. Product range may consist of one or more product families.
Step 4: Ensure raw material input traceability is in place

Manufacturer must be able to demonstrate raw material traceability for ITT (as required by BS EN 16034) and arranges for NB to carry out sampling
Step 5: Carry out ITT
Test programme is conducted (fire, smoke and durability)
Step 6: Write EXAPs & CRs
EXAPs are written to cover the product range. The EXAPs are used as the basis of the CR for the product range/families.
4 Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with Clause 7 of EN 13501-2:2007.

4.2 Classification

The element, product name (as described by the sponsor) is classified according to the following combinations of performance parameters and classes as appropriate.

| R | E | I | W | t | t | - | M | S | C | IncSlow | sn | ef | r |

Fire resistance classification: classification

4.3 Field of application

This classification is valid for the following end use applications:

(include reference to the appropriate European standard, if available, or other reference source)

5 Limitations

This classification document does not represent type approval or certification of the product.

SIGNED

APPROVED

signature of person undertaking classification

signature of person authorising this report

* Only include appropriate parameters in the table.
Step 7: Draw up Product Technical File
Draw together product technical file using test reports, EXAPS, CRs and manufacturing processes
Step 8: Arrange for NB to inspect FPC
NB visits factory to verify FPC against Product Technical File and issues CoCoP
Step 9: Draw up DOP

Manufacturer draws together the Declaration of Performance proving the product meets the necessary requirements and affixes the CE mark.
<table>
<thead>
<tr>
<th>CE marking, consisting of the “CE”-symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification number of the product</td>
</tr>
<tr>
<td>certification body</td>
</tr>
<tr>
<td>Name and the registered address of the manufacturer, or identifying mark</td>
</tr>
<tr>
<td>Last two digits of the year in which the marking was first affixed</td>
</tr>
<tr>
<td>Reference number of the DoP</td>
</tr>
<tr>
<td>No. of European Standard applied, as referenced in OJEU</td>
</tr>
<tr>
<td>Unique identification code of the product-type</td>
</tr>
<tr>
<td>Intended use of the product as laid down in the European Standard applied</td>
</tr>
<tr>
<td>Level or class of the performance declared</td>
</tr>
</tbody>
</table>
CE marking, consisting of the “CE”-symbol
Identification number of the product certification body
Step 10: Provide adequate info for installation
The manufacturer should also supply adequate installation instructions with the doorset to be supplied to market
CE Mark Doorset Manufacturer Summary

I.D. Product families and performance claims
Sampling
ITT
EXAPS and Classification Report
Product Technical Data
FPC and CoC
DOP and CoC
Installation

JOB DONE!!!!
Coffee BREAK!!
What is a Systems House?

Systems Houses - A company who has tested a system that is intended to be assembled by a Doorset Assembler, with ITT provided for use by the Doorset Assembler for the purpose of CE Marking

Systems Houses - Typically component manufacturers (frames, seals, door cores, hardware)
Doorset Manufacturer

Step 1: I.D. Product Range

Step 2: I.D. Performance classification

Step 3: Reverse engineer test programme

Step 4: Ensure raw material traceability is in place

Step 5: Carry out ITT

Step 6: Write EXAPs & CRs

Step 7: Draw up product technical file

Step 8: Arrange for NB to inspect FPC

Step 9: Draw up EC DOP

Step 10: Provide adequate info for installation

... WHEN EXPERIENCE MATTERS
Step 1: I.D. Product Range

Step 2: I.D. Performance classification

Step 3: Reverse engineer test programme

Step 4: Ensure raw material traceability is in place

Step 5: Carry out ITT

Step 6: Write EXAPs & CRs

Step 7: Draw up product technical file

Step 8: Arrange for NB to inspect FPC

Step 9: Draw up DOP

Step 10: Provide adequate info for installation
Systems House Requirements

- Must identify Product Families and Performance Classification for the Product Family to be offered to market

- A Systems House will supply the ITT to a Doorset Assembler but will not manufacture the product and will not be applying the CE Mark

- A Systems House must be able to demonstrate traceability of raw material used for the ITT and for the products supplied to the Doorset Assembler, as appropriate

- A Systems House must provide full manufacturing instructions to the Doorset Assembler as well as the ITT, to ensure the Doorset Assembler can manufacture with Constancy of Performance
Doorset Assembler

Step 1: I.D. Product Range

Step 2: I.D. Performance classification

Step 3: Reverse engineer test programme

Step 4: Ensure raw material traceability is in place

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Step 8: Arrange for NB to inspect FPC

Step 9: Draw up DOP

Step 10: Provide adequate info for installation
Doorset Assembler Requirements

- Doorset assembler must use products as stated within the ITT supplied by Systems House.
- Doorset assembler will be manufacturing the complete doorset and will provide the DOP for the product and affix the CE mark. A Doorset assembler will therefore take legal responsibility for the product placed on the market.
- The NB will issue the CoCoP to the Doorset Assembler and not the Systems House.
- A Doorset assembler will need FPC in order to demonstrate Constancy of Performance.
- Clear definition of legal responsibilities between the systems house and door assembler.
Q: Does the CE mark have to be visible after the doorset is installed?

A: No. The CE mark must be affixed permanently and indelibly to the product or packaging when it is placed on the market. After installation the CE mark does not have to be visible.
Frequently Asked Questions

Q: Do I have to supply the hardware as part of the doorset?

A: Yes. The complete doorset must be supplied by one legal entity and that includes all essential hardware.
Frequently Asked Questions

Q: Can a CE marked doorset be decorated on site?

A: Yes. A CE marked doorset can be decorated on site by others. It is recommended that the manufacturer placing a non-decorated CE marked doorset on the market also provides instructions for decorating, to make sure the decoration is carried out correctly and does not reduce its classified level of performance.
Frequently Asked Questions

Q: Can historic test evidence (test data that pre-dates the published EN 16034 standard) be used for CE marking?

A: Yes. BM TRADA’s current understanding is that historic data can be used providing the NB is satisfied that the data is appropriate for use (traceability of Constancy of Performance) and that the test evidence was generated at a laboratory that will be horizontally notified for the relevant tests standards listed within EN 16034
Frequently Asked Questions

Q: Can other performance claims be made for my fire resisting doorsets (e.g. thermal transmittance, load bearing capacity of safety devices)?

A: Yes. It is possible to use EN 14351-1 and prEN 14351-2 (external and internal pedestrian doorsets without smoke and/or fire performance) to make performance claims in addition to those given in EN 16034. The performance claims would be made on the DOP for the product placed on the market.
Summary

CE Marking of fire resisting doorsets should be available in 2015

Alternative routes to market will continue to exist but will be market (specification) led

Doorset manufacturers, Doorset assemblers and Systems Houses will all have a role to play in providing CE mark fire door doorsets to market

CE marking is not 3rd party certification and does not replace 3rd party certification

Claims of product performance is key for defining product range and developing appropriate test programme
Any questions?