

CE MARKING

Doors and Windows

1 Introduction

CE marking is the preferred method to prove compliance with the Construction Products Directive (CPD). Compliance is a legal requirement for manufacturers to place their products on the market in Europe.

BM TRADA and Chiltern International Fire are Notified Bodies for providing the necessary testing and certification to CE mark doorsets, windows and glass.

2 Construction Products Directive

The CPD seeks to break down the technical barriers to trade within the European Economic Area by standardising how products prove their performance, i.e. your test evidence should be valid in all member states for CE marking purposes.



Compliance with the CPD is mandatory in UK Law under the Construction Products Regulations (1991). Compliance is enforced by Trading Standards (with support from Building Control).

Manufacturers who break this law may be subject to severe penalties including heavy fines and prison terms for company directors. It is important that those in the trade are vigilant and report suspected contraventions.

3 Responsibility

The CPD requires products to demonstrate:

- Appropriate **performance** for end-use - based on testing (initial type testing and audit testing with certain product types)
- Consistent **manufacture** - based on factory production control (initial and on-going inspection)

These tasks may be carried out by the manufacturer and/or a Notified Body (NB). A NB is an independent third party recognised by the European Commission, typically a test laboratory and/or certification body (e.g. BM TRADA Certification is NB 1224).

The 'who does what' is defined by the Attestation of Conformity level associated with the product and its application.

4 Attestation of Conformity

The attestation levels define which tasks must be undertaken by the NB and which can be completed by the manufacturer. The lower the number, the higher



involvement of the NB. The attestation level for a product depends on how safety-critical it is. For example:

Attestation Level	1+	1	2+	2	3	4
Tasks for the manufacturer						
Factory production control	√	√	√	√	√	√
Further testing of samples taken at factory according to prescribed test plan	√	√	√			
Initial type testing			√	√		√
Tasks for the notified body						
Initial type testing	√	√			√	
Certification of FPC	√	√	√	√		
Surveillance of FPC	√	√	√			
Audit testing of samples	√					

- Fire doors are Level 1 - NB carries out initial type testing and certifies/surveys the factory production control system, the NB produces a certificate of conformity.
- Domestic front doors are Level 3 - NB carries out initial type testing, all other tasks are undertaken by the manufacturer, including declaring conformity.

The specific performance and production requirements for each product family are defined in the appropriate Product Standard.

5 Product Standard

The Product Standard provides a 'route map' to CE marking specific to a product group. Once the Product Standard has been agreed by the member states and posted in the Official Journal, compliance with the CPD becomes a legal requirement and CE marking is possible.

Product type	Standard	Publication Date
Windows and external pedestrian doorsets without resistance to fire and smoke leakage characteristics but including external fire performance for roof windows)	EN 14351-1	2006
Internal pedestrian doorsets without resistance to fire and smoke leakage characteristics	EN 14351-2	Expected 2011
Products with resistance to fire and smoke leakage characteristics	prEN 16034	Expected 2011
Industrial Doors	EN 13241-1: 2005	2005

The Product Standard covers:

- all the performance characteristics required by the Regulations in all member states
- the method of test
- method of declaration.

The Product Standard describes:

- the manufacturers' responsibility beyond product manufacture
- initial type testing
- factory production control
- when initial type testing and further type testing is required
- product marking and traceability.

The Product Standard references the relevant **European Norms** or EN (**test standards and classification documents**).

This information is summarised in Table ZA1 of Annex ZA of each Product Standard.

6 Annex ZA

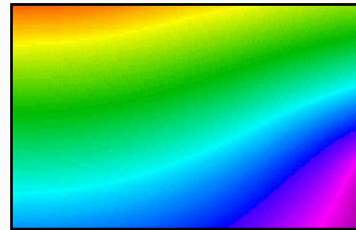
Annex ZA is essentially a checklist for CE marking, it lists the regulated requirements and the

relevant test methods. Test methods are EN methodologies so eventually National Test standards (e.g. BS, DIN, etc) will be superseded.

The Annex lists the essential characteristics. Essential characteristics must be considered (although you do not necessarily need to determine performance) because they relate to the requirements of the CPD.

The following is a summary of the requirements detailed in Table ZA1 of Annex ZA in **BS EN 14351-1** for pedestrian doors and windows:

Essential Requirements	Test Methods
Thermal (when required)	Calculation based on EN ISO 10077-1 & EN ISO 10077-2
	Testing (hot box) - EN ISO 12567-1 and prEN 12567-2
Weathertightness	BS EN 6375-1:2009 <ul style="list-style-type: none"> • Air permeability - BS EN 1026 • Watertightness - BS EN 1027 • Resistance to wind load - BS EN 12211
Dangerous Substances	Manufacturer confirms product not harmful to the environment, i.e. COSHH sheet
Acoustics (when required)	BS EN ISO 140-3
Durability (when required)	Including: <ul style="list-style-type: none"> • Ability to release (exit devices) - BS EN 179 and BS EN 1125
Impact resistance (glass or fragmental material) (when required)	BS EN 13049
Load bearing capacity of safety devices (when required)	BS EN 948 or calculation to the principles of BS EN 948



Thermal simulation



Weathertightness testing



Durability testing

Most of these test standards are already published, so you can carry out testing in advance of publication of the Product Standard. You may even have the relevant test evidence already e.g. the thermal standard is already accepted to demonstrate compliance with Part L in England and Wales.

7 Factory Production Control

The Factory Production Control system should cover:

1. **Organisation** - responsibility, management representative and management review
2. **Quality System** - responsible persons, inspection, testing and documentation - the manual which defines procedures and documentation.
 - Aims, structure, responsibilities and management
 - Specification of raw materials
 - The product and production control
 - Inspection and tests
 - Records
 - Test reports
 - Failures and the procedures for dealing with them
 - Documents of conformity from suppliers
3. **Handling, Storage Packaging and Delivery** – this needs to be fully traceable
4. **Training** of all staff and the maintaining of these records.

You may already meet these requirements through an existing ISO 9000 (or equivalent) quality management system. If so, it is a case of organising the paperwork correctly.

8 CE Marking

CE marking:

- enables a product to be legally placed on the market within any member state of the EEA
- is the responsibility of the manufacturer, agent or authorised representative
- is not a Quality Mark - third party certification will retain its role as a value added service.

In the UK, CE marking is not mandatory for construction products, BUT:

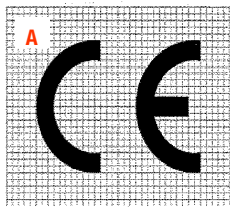
- The government expects that all products will be CE marked in order to provide presumption of conformity, parity with competitors and enhanced market confidence.
- Construction products will be legally required to demonstrate compliance with the CPD and the most effective way to do this is through CE marking.
- Manufacturers wishing to export to any of the other Member States, will be required to meet CE marking requirements and bear the marking.

CE Marking Checklist

- Define your product
- Review Annex ZA within the Product Standard
- Identify the essential characteristics
What performance do you need to claim?
What additional performance do you want to claim?
- Identify the attestation of conformity level
- Determine your / NB's responsibility
- Undertake testing - gather test evidence and classify your products
- Set up Factory Production Control - document the system to meet the requirements of the Product Standard
- Produce a Declaration of Conformity - organise your paperwork in a Technical File
- Affix CE Marking (if you choose to do so) e.g. mark the product with a CE (based on guidelines), list performance on the packaging, make full details available in the accompanying paper work.

The CE Mark can include:

- A** CE logo
- B** Notified Body number
- C** Manufacturer name and address
- D** Last 2 digits of the year marking affixed
- E** Certificate number
- F** Product Standard
- G** Product characteristics
- H** Declared performance of the product

A	
B	01234
C	AnyCo Ltd. PO Box 21, B-1050
D	04
E	01234-CPD-00234
F	EN 14351-1:2004
G	Type XYZ- Roof window intended to be used in domestic and commercial locations Resistance to wind load – Test pressure: Class 5 Resistance to wind load – Frame deflection: Class B Resistance to snow load: 4-16-4 Reaction to fire: Euroclass D External fire performance: npdWatertightness – Non-shielded (A): Class 8A Watertightness – Shielded (B): npd Impact resistance: 450
H	Load-bearing capacity of safety device: Threshold value Acoustic performance: 33 (-1; -5) Thermal transmittance: 1,7 Radiation properties – Solar factor: 0,55 Radiation properties – Light transmittance: 0,75 Air permeability: Class 4



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