

STA advice notes

CE marking (part 2)



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CE marking and the timber frame industry

This advice note from the STA provides background information to on CE marking of timber frame products - what it is and where it is required. It has been written for persons who are looking for an introduction to CE marking and to provide some more detailed explanations for those who have some awareness of the CE mark processes.

The content of this document will be of use and interest to timber frame manufacturers, architects, engineers and project managers for timber frame.

Limitations of this advice note

There are many certification and European-speak focused words and terminology used in CE marking, for which manufacturers and specifiers should obtain an understanding in order to ensure correct products are specified, sold and used. This advice note has an appendix, which is an introduction to the terminology.

This advice note is intended as a guide to the timber frame industry as an explanation of CE marking. The advice note provides information obtained by the STA and does not hold any legally binding interpretations. It is the responsibility of the timber frame manufacturer to seek expert advice on the legal requirements.

Contents

The STA advice note on CE marking is divided into two parts. This is Part 2.

Part 1

- Background briefing
- CE marking principles
- The Factory Production Control

Part 2 (this paper)

- Frequently asked questions and answers
- Definition of terms and further explanations



Frequently asked question and answers

What is CE marking?

The CE mark is the end result of a product certification process against a harmonised technical specification (hEN or ETA). Where no harmonised technical specification exists it is not possible to CE mark. For CE compliant products the legal requirement is to have a document called a Declaration of Performance (DoP) certificate.

What is a Declaration of Performance (DoP) certificate?

The DoP is the permission to apply a CE mark to a product. The DoP is a certificate that declares the minimum requirements set out in the technical specifications of the approval document that the product is being CE marked against. The DoP for construction products that are not self-certified (e.g. structural products) is produced by an official independent certification body (called Notified Body).

When is CE marking a legal requirement?

According to European legislation, from July 2013 where a harmonised technical specification exists, construction products will require a Declaration of Performance (DoP). The issue of a DoP from a Notified Body enables the product to have a CE mark. The DoP provides the confirmation of the product performance values as required by the harmonised technical specification. For the timber frame industry this typically means structural strength and release of hazardous substances.

What is a harmonised technical specification?

There are two types of standard to which a product can be assessed against. The first is a harmonised European Standard (hEN) and the second is a European Technical Approval (ETA).



What is a Notified Body?

The Notified Body is an organisation that has been approved by the member state representative to provide CE marking audits and issue DoP and/or provide testing to specific standards. Each Notified Body is assessed itself to carry out the required programme of works for the specific harmonised technical specification which the Notified Body wishes to be capable of undertaking audits/certification/testing. The list of approved harmonised technical specification matched to the Notified Body is provided on the website <http://ec.europa.eu/enterprise/newapproach/nando/>

Who is affected by CE marking?

- Product supply chains - who sell a CE compliant product
- Suppliers of product for assembly on the construction site - who sell a CE compliant product
- Product specifiers - who require a CE compliant construction product
- Purchasers of products - who incorporate CE compliant products into the construction

What is the law enforcing CE marking?

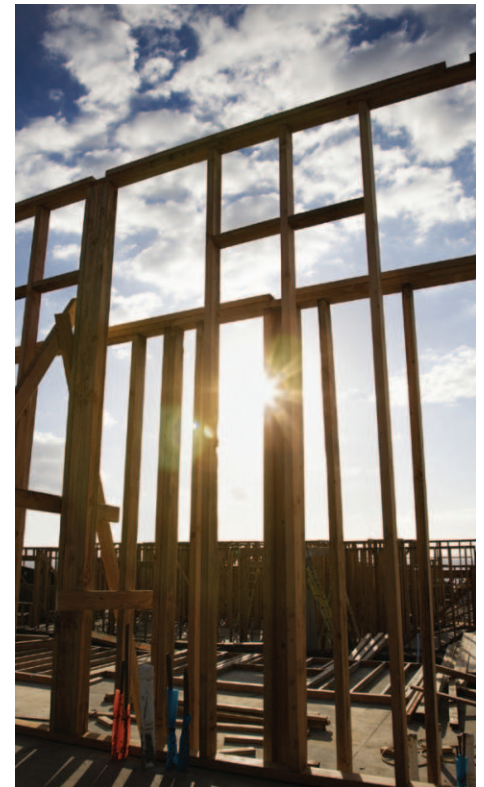
The Construction Products Regulation (CPR), published in April 2011, made product CE certification compulsory for many construction products in the UK. Trading standards will police the requirement and it will be a criminal law with penalties (fines, imprisonment) for absence or incorrect CE marking.

Does CE marking apply only to products made in Europe?

CE marking does not indicate that a product was made in the European member states, but states only that the product has been assessed against a harmonised technical specification before being placed on the market.

Why are specifiers concerned with CE marking?

It is necessary to ensure that building products specified are safe to use in a design and have a quality control audit where appropriate.



Why does CE marking not apply to all construction products?

Only construction products that have a 'harmonised European standard' (hEN) or a European Technical Assessment (ETA) can have CE certification. A hEN or ETA is a standard that has been written with a specific annex. In hENs this is Annex ZA which provides the performance conformity levels and the level of audit that the product shall undertake. There are different audit levels depending on the failure implications of the product in a construction product, for example a main structural item would have the high level of audit where as a cladding product may have a lower audit requirement.

**What are the products that require CE marking?**

CE marking is required for products that are sold on an open market out of a sales yard or direct from a factory. The products for CE marking are called various names such as parts, elements, components, assemblies or simply products; the relevant harmonised technical specification provides definitions of the product.

What is considered to be an open market?

An open market is one where the customer would have a choice to purchase competitors' products. The customer relies on the product to be part of another assembly or process, or for stock for onward sell - either out of a factory or sales yard or processing plant. The current harmonised technical standards relate to the product as sold, not to the assembly of various products on the construction site.

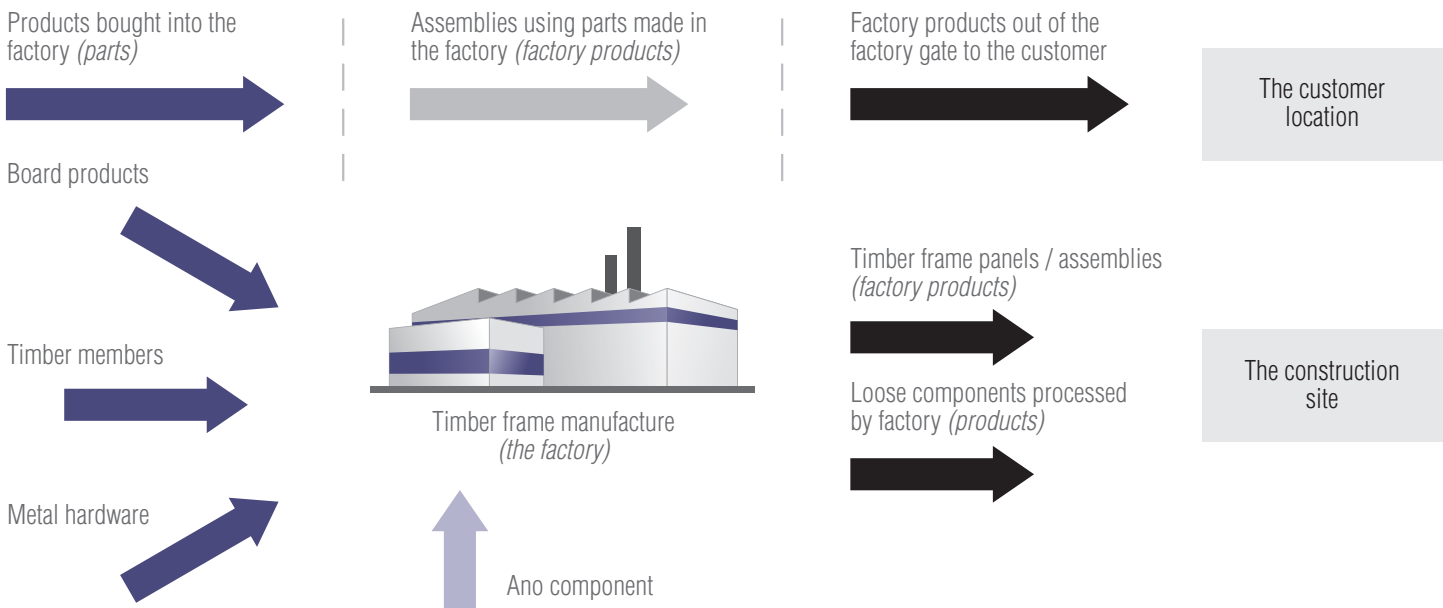


Figure 1.1 Typical supply chain route for products to a construction site or customer location

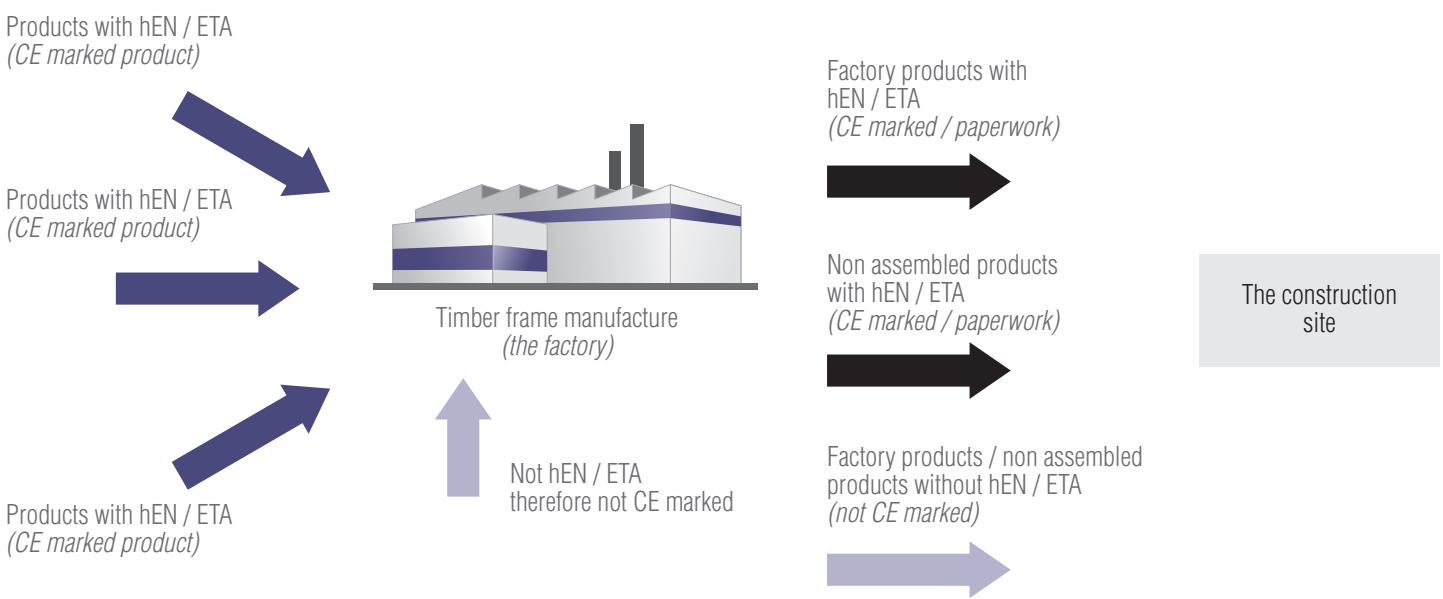


Figure 1.2 Typical supply chain route with the CE marking for products to a construction site

Harmonised technical specifications (hENs & ETAG) for timber frame manufacturers

Currently there are harmonised technical specifications for the separate products covering boards, solid timbers, engineered wood products such as Truss rafters, LVL and Glulam, fasteners, insulation and other component parts such as windows etc. There are ETAG complete room assemblies, structural insulated panels, I joists and open web joists, metalwork and non-load bearing partition systems. For the manufacture of common timber frame products such as wall, floor and roof assemblies, there is a harmonised European Standard in progress, currently a draft format called prEN14732 Timber structures – Prefabricated wall, floor and roof elements. There is as yet no date when EN 14732 will be published, but the STA, in recognition of raising quality standards and completion from other system products that have a harmonised European Standard, are requesting members to comply with the principles of prEN14732. The STA will provide a template manual on compliance with the code for its members.

What is involved in obtaining a CE mark for a product?

Each harmonised technical specification has a defined list of requirements. The basic element is that all products require a Factory Production Control (FPC) system for the business (the one selling the product) which is likely to have a requirement for an audit by a Notified Body. In addition the product shall have a Declaration of Performance (DoP) certificate produced by the Notified Body, which is the CE mark or permission to apply an actual stamped CE mark on the product.



How is it known that an audit is required?

The audit requirement is presented in the relevant code for the product. The number/level of audits is a function of the health and safety risk – structural products require a high level of auditing whereas cladding products may require a low level or no audits at all. The number or frequency of audits is also dependant on what is called the Attestation of Conformity (AoC) level.

What if I import a product and do not manufacture it?

The responsibility for CE marking lies with the business that sells the product to the customer. If a product is manufactured outside the European Economic Area, and it requires CE marking, the business that stocks the product must undertake the Factory Production Control (FPC) and engage the Notified Body to audit and produce the Declaration of Performance (DoP).

Do I need a CE mark for the supply of loose products to site?

Products such as joists, rafters, truss rafters, decking boards, floating floors, wall ties, joist hangers, breather membrane, insulation etc. may have a harmonised technical specification and therefore a CE marking requirement. If these products undergo any works by the timber frame manufacturer that changes the DoP (such as flame retardant, preservative treatment or notching) then, the original CE mark will no longer be valid and the manufacturer will need to carry out a new CE mark process for the changed product, in accordance with the relevant harmonised technical specification.

Is CE marking relevant to sales promotion?

CE marking only relates to a product's properties as declared. Only that property covered by a specific hEN or ETA local to the European country where it is certified is included. It does not, for example, cover aesthetics, other European country local regulations or installation of products outside a factory environment.

Is there a need for product testing to achieve CE marking?

For some construction products there will be a requirement to physically test the product for the performance declaration being sought. This is called, in the standards, Initial Type Testing (ITT). For most timber frame manufacturers' construction products which are structural in nature, an alternative to ITT called Initial Type Calculation (ITC) can be adopted. The ITC is a desktop activity using coordinated standards with values and calculations to demonstrate the product compliance for the DoP. Testing and calculations are referenced in the harmonised technical specifications in accordance with EN 1995-1-1:2004 under service class 1 and 2. Alternative national standards such as British Standards may be used in some circumstances and liaison with the Notified Body is required to clarify if it is relevant to the product being considered.



Definition of terms and further explanations

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| CE | Can be considered to be short for Conformité Européenne. CE marking provides a declaration of performance as required by the hEN it is being CE marked against. |
| EN 1995-1-1:2004 | European design code for timber structures. |
| Service Class 1 and 2 | Standard environment for construction products in a building. It is not for exposed external products. |
| Element | An assembled fabrication that can be a wall frame, floor cassette or roof cassette. It is not loose members that are sent out of the factory for assembly on site. |
| Loose members | Components that can be pre-cut or not, packaged in numbers suitable for the construction site, but not assembled until they are on the construction site. |
| Harmonised Standard (hEN) | Standard that includes clauses addressing the provisions of the EU Construction Products Directive, soon to be Construction Products Regulation (CPR). |
| CE Marking | This is the legal requirement for all construction products that have a harmonised European Standard (hEN) in place and applies to the product that leaves a factory on route to the customer. |
| Products | Is the term for a part, component, assembly or element that the factory sells to the customer. |
| Customer | Is the purchaser or purchaser's agent of the product. |
| Factory | Is the premises in which the product is manufactured. |
| Sales yard | The premises that a product is sold out of. |
| Initial Type Testing (ITT) or Initial Type Calculation (ITC) | A physical or desktop requirement to demonstrate a performance level. It is a physical test requirement for products in general or elements that are not covered by EN standards to determine the performance characteristics, for example, load bearing strength is typically available from EN codes, but may not be for special assemblies wishing to have bespoke performance values. |
| Timber frame manufacture | Is any natural or legal person who manufactures a construction product or who has such a product designed or manufactured, and markets that product under his name or trademark. |
| CPR | <p>Construction Products Regulation which supercedes the Construction Products Directive (CPD). Under the CPR, the whole supply and distribution chain must take responsibility, which means that not only manufacturers but their importers and distributors as well, need to be aware of any essential characteristics or specific requirements of member states.</p> <p>The CPR sets out seven basic works requirements:</p> <ul style="list-style-type: none"> • mechanical resistance and stability • safety in case of fire • hygiene, health and environment • safety and accessibility in use • protection against noise • energy, economy and heat retention • sustainable use of natural resources. |

Definition of terms and further explanations cont.../

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| Notified Body | <p>A Notified Body is an organisation that has been accredited by a European Member State to assess whether a product meets certain performance standards. The notified body will undertake the Factory Production Control audit and issue a Declaration of Conformity from which the manufacturer can label the product with the CE mark.</p> <p>Notified Body organisations are found on the website for Nando (New Approach Notified and Designated Organisations) http://ec.europa.eu/enterprise/newapproach/nando/ http://ec.europa.eu/enterprise/newapproach/nando/index.cfm?fuseaction=country.notifiedbody&cou_id=826</p> |
| European Technical Approval (ETA) | Favourable technical assessment of the fitness for use of a product for an intended use, based on the fulfilment of the Essential Requirements for building works for which the product is used. |
| European Technical Approval Guidance (ETAG) | Document used as the basis for preparing ETAs, which contains specific requirements for the products within the meaning of the Essential Requirements, the test procedures, the methods of assessing and judging the results of the tests, the inspection and conformity procedures. |
| AOC system | Attestation of Conformity system for attesting the conformity of construction products to harmonised technical specifications (hEN or ETAG). |