

“CE MARKING FOR TECHNICAL INSULATION (INSULATION OF BUILDING EQUIPMENT AND INDUSTRIAL INSTALLATIONS)”

1. What does “CE marking” mean?

→CE marking is a passport for the product for the whole European Economic Area (EEA).

By definition, CE marking covers all legal requirements prevailing in all member states. It may be reasonable to think that CE stands for Communauté Européenne, meaning European Community in French, or Conformité Européenne (European conformity) but officially it is simply a logo.

When the CE mark is applied to a product and/or accompanying documents, it indicates conformity with the harmonized part of the European Standard (EN) or European Technical Approval Guideline (ETAG). This means that the product can be traded all over the European Union, but it is necessary to check whether the product fulfils the requirements in the place of use.

2. What are the legal principals of the CE marking?

→The CE marking concept was introduced with the harmonization concept of the EU which was passed and introduced as the “new approach” in May 1985. The aim of the new approach was to standardize the technical legal provisions and specifications of the EU countries!!

The Construction Products Directive (89/106/EEC) was subsequently introduced in order to set the further legal basis for the introduction of the CE mark.

3. What are the six essential requirements (ER) of the European CPD?

- Mechanical resistance and stability
- Safety in case of fire
- Hygiene, health and the environment
- Safety in use
- Protection against noise
- Energy economy and heat retention

These ERs have been translated into characteristics for construction products in harmonized technical specifications.

4. Is a CE marking compulsory?

→Yes. CE Marking is compulsory after the coexistence period. The obligation normally takes effect about one year (depending on the standard) after publication of the harmonized standards or the ETAG when the conflicting national documents should be withdrawn.

The coexistence period for technical insulation standards (so-called WG10 standards) has been chosen to be 2 years and ends August 1st 2012. After this date no technical insulation can be traded within the EEA (European Economic Area) without having a CE mark.

This applies to all EU countries except the United Kingdom, which does not agree to compulsory CE marking under the CPD and is waiting until the CPR is in force. This means in the UK CE marking will be compulsory as of July 2013.

5. Which countries are obliged to ask for a CE marking?

→This obligation applies to countries within the European Economic Area, so including Norway and Iceland

6. Who / Which organisation grants the CE mark?

→ In general, it is the responsibility of the manufacturer to verify whether or not a product falls within the scope of the CPD, and to have those products marked. Where the products are imported from countries outside the European Economic Area (EEA), this responsibility falls on the importer within the Community.

If a product falls under the scope of the CPD the following applies:

- The assessment report from the initial inspection, test reports (and a classification report for reaction to fire) from the notified laboratories and test reports from the manufacturer (covering all declared characteristics from Table ZA.1 of the product standards) shall be sent to the certification body.
- The certification body shall confirm that tests were conducted according to the criteria given in the product standard, including evaluation of test results; that the samples tested come from the product for which a certificate of conformity is being applied for and that the FPC (Factory Production Control) fulfils the criteria given in the product standard.
- Based on the certificate of conformity for the product from the certification body, the manufacturer issues a declaration of conformity for the product. The product can now be marked with the CE mark.

7. What is the time-frame for the introduction of the CE mark for technical insulation products?

→ With Construct 09/873 (official paper) of the EU (published in Jan. 2010) the timing for the introduction of the product standards / CE mark was defined.

The coexistence period (time when national standards/regulations conflicting with the EU product standards are still allowed to be used)...

- starts in August 2010
and
- ends in August 2012.

Note: This period was extended by 12 months because experts expect the testing institutes across Europe to experience a bottleneck due to the expected high number of ITTs.

This means that at the latest after August 2012 no "technical insulation" can be sold in Europe without having a CE mark!

Manufacturers are not allowed to sell Technical Insulation products without a CE mark after 01.08.2012!

Wholesalers are allowed to sell products without a CE mark for one year longer, i.e. until 01.08.2013!

8. What are the requirements to get a CE mark?

→ In principle, CE Marking sets no requirements, but it does establish the performance characteristics for a product.

Depending on the country or type of product, minimum performance levels can be required.

Examples of this are electrical devices such as coffee machines that must not produce electric shocks when touched. This applies to all EU countries. However, the CE marking does not tell us whether the coffee tastes good or not.

In the world of construction materials, the CE Marking indicates the conformity of the material with the relevant European specifications. This means that the assembled CE marked product, provided it is used and maintained correctly, satisfies the six main aspects of the European Construction Products Directive.

- Construction products can be placed on the market only if they are fit for the intended use
- Construction products are considered fit for use if they comply with the harmonized European specifications (standards) on the basis of the CPD and if they bear the CE marking.
- Application / Fulfilment of the harmonized (TC88/WG10) standards (for technical insulation) leads to conformity with the CPD and thus to obtaining the CE mark!

The respective product standards define which product characteristics must be “assessed” (i.e. which are important for the product in question!). E.g. according to EN 14304 (FEF – standard): Obligatory properties (Chapter 4.2 ‘Requirements for all applications’) and Optional properties (Chapter 4.3).

9. When can a CE marking be applied?

→CE Marking and declaration of conformity can only be issued if a harmonized technical specification exists and has been cited in the Official Journal of EU with dates of coexistence period.

Products that refer to a European harmonized standard (e.g. EN 14304 (for FEF) or EN 14313 (for PEF)) follow the CEN procedure.

The CE mark can be applied if the products do comply with the relevant harmonized European Standard.

10. Why is a CE marking so important?

→Because CE marking is a passport for the product for the whole European Economic Area (EEA).

By definition, CE marking covers all legal requirements prevailing in all Member States. CE marking helps to remove trade barriers and is one means to strengthen the integration of the members of the EU.

CE marking helps to make construction products comparable for customers and will foster the construction market as such.

11. What does Attestation of Conformity (AoC) mean?

→Attestation of Conformity is defined in EN 13172 (Thermal insulation products – Evaluation of conformity).

It is a system to approve the conformity of a product with the respective provisions in the harmonized standards. Different “system”-options are possible for obtaining the AoC.

Attestation Systems			
System	Task for Manufacturer	Task for Notified Body	Basis for CE marking
4	<ul style="list-style-type: none"> ITT of product FPC 		Declaration of conformity of the Manufacturer
3	<ul style="list-style-type: none"> FPC 	<ul style="list-style-type: none"> ITT of product 	
2	<ul style="list-style-type: none"> ITT of product FPC (testing of samples according prescribed test plan) 	<ul style="list-style-type: none"> certification of FPC on basis of initial inspection 	
2 +	<ul style="list-style-type: none"> ITT of product FPC (testing of samples according prescribed test plan) 	<ul style="list-style-type: none"> certification FPC on basis of initial inspection and continuous surveillance, assessment and approval of FPC 	Declaration of conformity of the Manufacturer based on certificate of conformity of FPC
1	<ul style="list-style-type: none"> FPC testing of samples according prescribed test plan 	Product certification on basis of: <ul style="list-style-type: none"> ITT of product initial inspection of FPC continuous surveillance, assessment and approval of FPC 	Declaration of conformity of the Manufacturer based on certificate of conformity of product
1 +	<ul style="list-style-type: none"> FPC testing of samples according prescribed test plan 	Product certification on basis of: <ul style="list-style-type: none"> ITT of product initial inspection of FPC continuous surveillance, assessment and approval of FPC audit testing of samples 	

12. Why are there different kinds of AoC?

→The system of attestation of conformity for CE marking of a product is chosen in accordance with annex ZA of the relevant product standard. Most thermal insulation products will fall under attestation of conformity (AoC) system 1 or 3 (for reaction- to-fire declarations A1, A2, B and C).

13. How does a conformity assessment work?

→E.g. Attestation of Conformity System 1 + 3

This system is based on obtaining a certificate of conformity for the product. The following notified (external) bodies are involved in the evaluation of conformity of products:

- Certification body
- Inspection body
- Testing laboratories

The functions of the bodies can be carried out by the certification body alone (if it is notified to do inspection and testing) or by several different bodies. If more than one body is involved they all carry out their functions on behalf of the certification body.

All bodies involved shall be notified by the EU Member States and EFTA and mentioned in the Official Journal of the European Communities.

Procedure

The manufacturer identifies the product or group of products for which he wants to apply for CE marking. The manufacturer then contacts a certification body. The certification body appoints an inspection body and one or more notified laboratories. This can either be separate bodies or it can be from the same organization as the certification body. If the manufacturer has a specific wish concerning which inspection body and/or testing laboratories he wants to involve, he will have to make an agreement with the certification body to appoint the other bodies.

Certificate of conformity

The assessment report from the initial inspection, test reports (and a classification report for reaction to fire) from the notified laboratories and test reports from the manufacturer (covering all declared characteristics from Table ZA.1 of the product standard) shall be sent to the certification body. The certification body shall confirm that tests were conducted according to the criteria given in the product standard, including evaluation of test results, that the samples tested come from the product for which a certificate of conformity is applied for and that the FPC fulfils the criteria given in the product standard.

14. What is a “Declaration of Conformity” (DoC)?

→Based on the certificate of conformity for the product from the certification body, the manufacturer issues a declaration of conformity for the product. The product can now be marked with the CE mark.

15. Where can I find the DoC?

→New Approach directives impose an obligation on the manufacturer or the authorized representative established within the Community to draw up an EC declaration of conformity (the abbreviation DoC is normally used) when the product is placed on the market. Council Decision 93/465/EEC concerning the modules requires the manufacturer to ‘draw up a written declaration of conformity’. The DoC may cover either individual or several products and may either accompany the product(s) or be kept by the manufacturer. The Decision does not impose any other obligations except the one for keeping a copy of the DoC with the technical documentation, generally for a period of 10 years (some directives provide for lesser periods).

16. What is a “Notified Body”?

→A Notified Body is an organization that has been nominated by a member of government and notified by the European Commission. A Notified Body will be nominated based on designated requirements, such as knowledge, experience, independence and resources to conduct the conformity assessments.

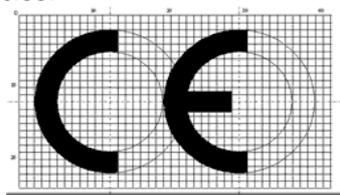
The primary role of a Notified Body is to provide services for conformity assessment under the conditions set out in the New Approach Directives in support of CE Marking. This normally means assessing the manufacturer’s conformity to the essential requirements listed in each directive.

Conformity assessment can be inspection, quality assurance, type examination or design examination, or a combination of these.

17. What does a CE mark look like?

→In general, the CE mark must appear on products but it may also appear on packaging, in manuals or other supporting literature.

Armacell has chosen to put the CE mark on the labels, for example. The CE mark must take the form below, which can be reduced or enlarged, but the proportions must be maintained. It should be noted that the C and the E are not perfect semi-circles.



18. Do we have any advantage by adopting the CE marking for technical insulation?

→There are a significant number of advantages of CE marking for the manufacturer and for the end-user or consumer.

In particular:

- CE marking provides manufacturers with market access to the whole European Economic Area, since countries within this area may not restrict the placing on the market of products bearing the CE marking.
- It guarantees that the product conforms to the regulations in the specific Directive(s)
- It is a guarantee for the manufacturer that the product is safe for end-users (consumers)
- It may significantly reduce damage claims and liability premiums
- It may increase and foster business for all involved parties and distribution levels (manufacturer/wholesaler/end-user).
- It supports the “technical integration” of the single European member states as an important door-opener for a wider and more intensive political integration in future.

19. Will it be allowed to sell and use non “CE-marked” products in future?

→No, after August 1st, 2012 it is not allowed to sell any “technical insulation” covered by the CPD and/or harmonized European Standards without a CE mark.

The CE marking must be placed on a product before it is launched within the European Economic Area (EEA), i.e. 27 EU Member States plus Iceland, Liechtenstein and Norway. The CE marking is mandatory even if the product was manufactured outside these countries, but it is not required for exporting a product to non-EEA countries.

According to the free movement of goods principle within the EU, Member States may not forbid, restrict or impede the placing on the market of products bearing the CE mark, unless the provisions relating to CE marking are incorrectly applied, or there is a hazard that is not covered by the applicable Directives.

20. Will the insulation product requirements and performance levels change with the introduction of the CE mark?

→No, the CE mark does not define any requirements on performance levels for insulation products to be applied in construction works. This is still the responsibility of national authorities in the member states of the EU.

In other words, the “CE-marking system” defines the technical properties, how to test and classify products, but does not interfere when it comes to minimum performance levels required for specific applications in different member states.

21. What are the required properties for a technical insulation product according to the European product standard?

→The respective product standard (e.g. EN 14304: Thermal insulation products for building equipment and industrial installations – Factory made flexible elastomeric foam (FEF) products – Specification) defines which product characteristics must be “assessed” (i.e. which are important for the product in question!)

Obligatory properties (Chapter 4.2 ‘Requirements for all applications’) are:

- Fire behaviour (Euroclasses)
- Dimensions and tolerances
- Thermal conductivity
- Dimensional stability
- Durability characteristics

Optional properties (Chapter 4.3 ‘Requirements for specific applications’) are:

- Maximum service temperature
- Minimum service temperature (may be introduced)
- Water vapour diffusion resistance: μ - value $\geq 1,000, \geq 3,000, \geq 5,000, \geq 7,000, \geq 10,000, \geq 15,000$
- Structure-borne sound transmission
- Sound absorption
- Water absorption
- Trace quantities of water-soluble ions and pH-value
- Release of dangerous substances

22. What is a CE mark designation code and what does it look like for Armacell products?

→The Designation Code is a statement of technical properties with their defined levels which accompanies the CE mark. The Designation Code consists of all technical properties relevant for the intended use of the relevant insulation product.

The Designation Code for the Armacell products is part of the CE marking and can be found at the bottom of each product label, close to the CE mark.

09/08/2012



The Certificates of Conformity (CoC) also have the designation code information. Here is an example of a CoC for Armacell products with the associated designation code:

Product name	Description	Thermal conductivity λ_D at 0 °C W/mK	Reaction to fire Euroclass	Maximum service temp. (ST(+)) °C	Minimum service temp. (ST(-)) °C	Water vapour resistance factor (MU)	Soluble ions/pH (CL)	Designation code of manufacturer
Armaflex Duct Sheets (9-25 mm)	Elastomeric sheets	0,036	D-s3,d0	110	-20	7000	-	FEF - EN14304 - ST(+)-110 - ST(-)-20 - MU 7000
Armaflex Duct Sheets (32-40 mm)	Elastomeric sheets	0,038	D-s3,d0	110		7000		FEF - EN14304 - ST(+)-110 - ST(-)-20 - MU 7000
Armaflex Duct AL Sheets (9-25 mm)	Elastomeric sheets with coating	0,036	E	110		7000		FEF - EN14304 - ST(+)-110 - ST(-)-20 - MU 7000
Armaflex Duct AL Sheets (32-40 mm)	Elastomeric sheets with coating	0,038	E	110		7000		FEF - EN14304 - ST(+)-110 - ST(-)-20 - MU 7000
Arma-Chek Silver AF Tubes (AF2, AF4)	Elastomeric tubes with coating	0,033	C _s -s3,d0	110	-50	15000	300	FEF - EN14304 - ST(+)-110 - ST(-)-50 - CL 300 - MU 15000
Arma-Chek Silver AF Tubes (AF5)	Elastomeric tubes with coating	0,036	C _s -s3,d0	110				FEF - EN14304 - ST(+)-110 - ST(-)-50 - CL 300 - MU 15000
Arma-Chek Silver Tubes (13-19 mm) Sheets (13-25 mm)	Elastomeric sheets and tubes with coating	0,036	E	110				FEF - EN14304 - ST(+)-110 - ST(-)-50 - MU 15000
Arma-Chek Silver Tubes (25-40 mm) Sheets (32-50 mm)	Elastomeric sheets and tubes with coating	0,038	E	110				FEF - EN14304 - ST(+)-110 - ST(-)-50 - MU 15000

23. Does the CE mark set any requirements for the application of the products?

→No, the CPD and the harmonized European product standards only define requirements for the product as placed on the market.

Requirements (min. or max. levels of performance) for the application of the technical insulation products are not subject to the CE marking; they are only defined on a national level or on demand when specific requirements for construction works are to be defined.

24. Is it important to have European Fire Classes (Euroclasses) for my technical insulation product in order to get a CE mark?

→It is compulsory to have the insulation products tested and specified following the European Fire Classes systems if they are to get a CE mark.

Euroclasses are an important component of the CE marking and have been defined and established alongside the preparation of the harmonized European product standards.

25. Can I have Euroclasses defined for my product without having a CE mark?

→Yes, of course a product can be tested according to the Euroclasses set-up without having the intention to also fulfill the other obligations necessary to get a CE mark (such as Initial Type Testing or Factory Production Control etc.).

26. How does Armacell comply with the European requirements in respect to CE marking?

→Armacell was the first manufacturer of technical insulation products to get the CE mark for its product portfolio. The Münster plant was certified back in November 2011. First products with the CE marking label entered the market in February 2012.

Armacell was one of the main drivers and contributors in terms of European harmonization (e.g. writing the European product standard, chairing Task Groups and being a member of a number of EU Technical Committees and Working Groups).

The European Armacell production facilities and the products manufactured there are in line with CE marking requirements in time and will provide CE-marked products as of August 1st 2012.

27. What are the advantages for the market participants (manufacturers, wholesalers and the craftsmen (installer, contractor))?

→The product standards and CE labelling are intended to aid manufacturers, distributors and installers in cross-border trade.

At least, all market participants will have a better basis for their technical, commercial or even legal decisions.

- **Manufacturers** of technical material must follow the requirements and definitions of product standards, which may be perceived by some as a disadvantage, but also bear huge opportunities. For example, for the first time manufacturers will have the chance to develop a product for the whole European market that is distributed (and often also used) across all national borders. Compliance with harmonized product standards is a prerequisite for the free trade with technical insulation materials in Europe.
- **Wholesalers** can make in the future more effectively their business without being hampered by national regulations.
- **Professional installers and planners** will find advantages being able to offer and use their expertise more easily across borders. Tenders must not be bound by borders.

The transparency of this process allows a direct and fast comparison of the products on offer. There are now firm rules for all. Finally, this all results in a great advantage in terms of product liability: in the past it was often difficult for the courts to track compliance with the pledged properties in case of damages. The European standards will make it easier for the courts in this regard.

28. How many CE markings can be applied on a product?

→Only one.

If other EC Directives apply simultaneously for one insulation product (e.g. the Low Voltage Directive, the Electromagnetic Compatibility Directive, the Machinery Directive etc.), the Commission requests CEN or EOTA to include in the harmonized technical specification (standard) under the Construction Products Directive all necessary information on the other Directives that apply for a given product. This means all requirements will be summarized under just one CE mark.

29. What is the difference between harmonized and non-harmonized product standards?

→The harmonized standards are prepared following a mandate from the Commission to CEN. The mandates define the characteristics of the products which must be covered, following regulations in Member States. This means that products bearing the CE marking, i.e. complying with the harmonized specification, can be sold within the EU. Justified restrictions may still exist in cases where specific classes and/or levels of performance are required by a Member State as foreseen in the Art. 3.2 of the CPD. Harmonized product standards have an Annex ZA which clearly identifies which parts of the whole standard are mandatory for CE marking. Non-harmonized European standards neither require a mandate for the EU nor do they have an Annex ZA.

30. Which Directorate within the European Commission “manages” the CE marking issues?

→The European Commission Enterprise Directorate General is in charge of “managing” the CE-marking issues.

31. From a legal point of view, who is responsible for the CE marking of an insulation product?

→It is the responsibility of the manufacturer to verify whether or not a product falls within the scope of the CPD and to have those products marked with the CE. This means he is solely responsible for the CE mark of his products.

Where the products are imported from countries outside the European Economic Area (EEA), this responsibility falls on the importer within the Community.

32. What are the consequences if a producer/manufacturer does not comply with the CE-marking rules yet shows a CE mark on a product?

→The product has to be CE marked in a correct way or it is illegal on the market and has to be removed from the market by Member States. Legal consequences depend on national legislation.

33. Is any market surveillance intended under the CE-regime?

→Although the CPD intends market monitoring to take place ...

(CPD art. 21 – (market surveillance): MS ascertaining that a product does not comply with the requirements of art. 2 and 3, shall take all appropriate measures to withdraw it from the market...)

...the market surveillance is practically absent, despite the fact that it forms an integral part of the implementing mechanism of the CPD!

There are also other regulations on EU level dealing with Market surveillance:

Market surveillance authorities, pursuant to Regulation (EC) No 765/2008, must assess the product to determine whether it should be withdrawn from the market.

- *“.....Member States guarantee effective surveillance of their market. They are required to organise and carry out close monitoring so that the products covered by Community harmonisation legislation meet the requirements for protection of public interests such as health or safety.....”*

But there is no direct market surveillance linked to CE marking for construction products!!

EU member states and “market participants” (industry) are asked to take care of market monitoring!

For example, Germany:

DIBt statement:

“...In Germany the Laender are responsible for the market surveillance of construction products which are harmonized according to the Construction Products Directive.

A central office located at DIBt acts as coordinator in matters relating to the market surveillance.

In the past the market surveillance authorities of the Laender in Germany acted depending on the cause (e.g. based on complaints). As of 2010 new European requirements will apply. The key issue of the new regulations is an active (inter alia based on appropriate checks) market surveillance...”

This again is just a theoretical approach – the “Laender” have defined their central monitoring departments – but have not added resources and manpower to these departments – active monitoring is not in place!!!

34. Are environmental questions addressed by the CE marking too?

→Not right now, but the next revision of the harmonized product standards will address environmental issues (which are dealt with under the TC 350) and also regulated dangerous substances issues (dealt with under the TC 351).