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GUIDANCE PAPER E

(concerning the Construction Products Directive - 89/106/EEC)

LEVELS AND CLASSES IN THE CONSTRUCTION PRODUCTS DIRECTIVE

(Revision Aug 2002)

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Preface

Article 20 of the Construction Products Directive (89/106/EEC) states that the Standing Committee may, "at the request of its Chairman or a Member State, examine any question posed by the implementation and the practical application of this Directive".

*In order to ensure as far as possible a common understanding between the Commission and the Member States as well as among the Member States themselves as to how the Directive will operate, the competent services of the Commission, assuming the chair and secretariat of the Standing Committee, may issue a series of **Guidance Papers** dealing with specific matters related to the implementation, practical implementation and application of the Directive.*

These papers are not legal interpretations of the Directive.

They are not judicially binding and they do not modify or amend the Directive in any way. Where procedures are dealt with, this does not in principle exclude other procedures that may equally satisfy the Directive.

They will be primarily of interest and use to those involved in giving effect to the Directive, from a legal, technical and administrative standpoint.

They may be further elaborated, amended or withdrawn by the same procedure leading to their issue.

LEVELS AND CLASSES IN THE CONSTRUCTION PRODUCTS DIRECTIVE

1. Scope

- 1.1 This Guidance Paper clarifies the use of classes and levels within the context of the implementation of Council Directive 89/106/EEC¹ (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EC². It also addresses the related issue of national provisions³ on works and the fitness for use of construction products.
- 1.2 The Guidance Paper is intended for technical specification writers (CEN/CENELEC and EOTA members), for consideration together with the respective mandates and provisions given therein, and regulators and enforcement authorities within the European Economic Area (EEA). It takes account of the Communication of the Commission with regard to the interpretative documents of Directive 89/106/EEC⁴.
- 1.3 The Guidance Paper refers, in particular, to Articles 2(1), 3(2), 4(2), 6(1), 6(3), 12(2) and 20 of the CPD and sections 1.2 of the Interpretative Documents. The full text of these provisions can be found on the Internet site of DG [Enterprise construction unit](#)⁵. The Annex provides a summary of the underlying basis of the paper.

2. Classes (and levels ⁶) of essential requirements (on works and parts thereof)

Definition and analysis :

- 2.1 A quantitative expression of the behaviour of a construction works or parts thereof, for an action to which it is subject or which it generates under the intended service conditions. Classes express the range of performance levels of construction works in relation to the Essential Requirements of the CPD. The need for them derives from the differences in the levels for essential requirements on works in the Member States, for the reasons set out in Article 3(2) of the CPD.
- 2.2 The use of such classes of essential requirement is obligatory for Member States wishing to fix performance levels for the works to be observed on their territory (*CPD Article 6.3*). As the Member States are responsible for the design and execution of construction works and harmonisation of these aspects is not currently foreseen, **it is considered that the need for the establishment of classes of essential requirements at a European level will be limited**. The Commission will consider any request to establish such classes. Any decisions on classification

¹ OJ L 40, 11.2.1989

² OJ L 220, 30.8.1993

³ The term “national provisions” is used throughout this paper to refer to “national laws, regulations and administrative provisions”.

⁴ OJ C 62, 28.2.1994

⁵ <http://europa.eu.int/comm/enterprise/construction/index.htm>

⁶ Levels of essential requirement effectively create 2 classes, above and below the level, and can thus be considered as being analogous to classes of essential requirement. Where the term “class” is used in this chapter, one could also read “level”.

systems would have to be elaborated in accordance with the procedures laid down in Article 20 of the CPD.

Example :

- 2.3 Essential Requirement No.2 – *resistance to fire*. The classification of resistance to fire performance generally applies to works or parts of works (e.g. walls, floors, roofs, partitions, ...) rather than products, although the two do coincide in some cases (e.g. fire doors, smoke curtains, cables, ...). In specifying the requirements for resistance to fire in works, the Member States are obliged to refer to the European classification system that has been established, *i.e.* [Commission Decision 2000/367/EC](#)

Guidance for technical specification writers :

- 2.4 Product specification writers are not expected to make proposals for classes of essential requirements, as they are a regulatory matter concerning works. However, technical specifications must be adapted to incorporate any classes of essential requirements established at a European level according to the above procedure.

3. Levels of product performance - threshold levels

Definition and analysis :

- 3.1 A quantitative expression of the behaviour of a construction product, for an action to which it is subject or which it generates under the intended use conditions. Levels of product performance can relate to the product as whole or to individual characteristics or combinations of characteristics. They can be used to define a construction product for a specific intended use ⁷, to set a minimum performance below which a product cannot in any circumstances be considered fit for that use (threshold levels) or as a basis for the establishment of classes of product performance. The latter are dealt with in the following chapter ⁸. Threshold levels are not subject to Articles 3(2) and 6(3) of the CPD.
- 3.2 All construction products have to be properly defined in the technical specifications, for the use for which they are intended. In this context, it may be necessary to fix threshold levels relating to aspects of a product's performance – e.g. characteristics (for performance based specifications), composition or dimensions (for descriptive specifications, where appropriate).
- 3.3 Fitness for use is a fundamental concept of the CPD, but is dependent upon the intended use of the product and is subject to national provisions on the design and execution of works (*Article 2.1 of the CPD*). However, it may be necessary to fix

⁷ Intended use is defined in the IDs as referring to the roles(s) that the product is intended to play in the fulfilment of the essential requirements.

⁸ Where only 2 “classes” of product performance are required, above and below a given level, then the level would serve as the means of differentiating between the two types of behaviour and the establishment of classes would not be necessary. However, such levels have to be considered in the same manner as classes of product performance (see next chapter).

minimum⁹ levels of performance at a European level, relating to some or all aspects of a product's performance. Two principles determine the need for such threshold levels to be fixed in technical specifications. Firstly, there may be levels for certain performance characteristics below which a construction product cannot under any circumstances be considered fit for a specific intended use. Secondly, threshold levels of product performance may be necessary to ensure that unsafe, or otherwise dangerous or unfit, products cannot achieve the CE marking, and hence be placed on the EEA market, simply by the producer declaring a very low performance for all of the required characteristics. These levels would provide a minimum performance threshold for the European market, without removing the possibility for Member States to fix more stringent levels for specific intended uses where appropriate (see chapter 5).

- 3.4 The extent of the breakdown of intended uses within a technical specification will have an influence on the need to fix minimum levels of performance. For example, if no breakdown of intended use is specified (i.e. general use), then the only level required would be the threshold below which the defined product cannot be considered fit for any possible use (i.e. the level for the least demanding use and not the level required to guarantee a minimum fitness for all possible uses). A product falling below this threshold could not be CE marked on the basis of the technical specification and could not normally be placed on the European market¹⁰. The more intended use is differentiated, the more relevant levels on product performance become.
- 3.5 In some cases, a pass/ fail test may be an acceptable means of expressing a minimum performance for a given characteristic. This will depend upon the nature of the characteristic and the method of determination used.
- 3.6 Where threshold levels of product performance have been established in technical specifications to define a product for a specific intended use, the “*No Performance Determined*” option cannot be invoked by producers for those characteristics concerned, even if some Member States do not regulate explicitly for that characteristic.

Examples :

- 3.7 *Threshold level for product definition* – (1) below a certain threshold level of compressive strength, a cuboid of a certain material cannot under any circumstances be considered to be a “brick”; (2) a chimney flue cannot be permitted to allow large quantities of smoke to escape through its walls.
- 3.8 *Threshold level for a specific intended use* – products with a thermal conductivity at 10°C > 0.06 W/(m.K) or a thermal resistance < 0.25 m².K/W are not considered by CEN TC88 to be “thermal insulation products” falling within the scope of their European standards (i.e. their intended use is not considered to be to provide thermal insulation).

⁹ The term “minimum level” is used throughout this Guidance Paper, but maximum levels could also be envisaged, e.g. maximum release/ content of a dangerous substance.

¹⁰ Articles 4.4 and 4.5 of the CPD may permit a derogation from this principle.

- 3.9 *Performance level set by pass/fail test* – the assessment of the characteristic “impact resistance” is often carried out by means of pass/ fail tests. An example is the test for the resistance to soft body impact for internal partition kits (EOTA) – if tested for this characteristic, minimum levels are fixed for “no penetration, no collapse, no other dangerous failure”, depending upon the use category.

Guidance for technical specification writers :

- 3.10 The fixing of threshold levels of product performance, either to define a construction product for a specific intended use or to set a minimum performance below which a product cannot in any circumstances be deemed fit for that use, is considered to be a technical matter delegated to the competent bodies recognised by the Commission for the drawing up of technical specifications. No further intervention of the EC or SCC is generally foreseen on such matters ¹¹.
- 3.11 The threshold levels of product performance established according to the guidance in this section form an integral part of the technical specifications (e.g. the harmonised normative part of a European standard to which its Annex ZA refers), in effect defining their scope and hence the products that may be CE marked through them. Specification writers must therefore adhere to certain principles in fixing such levels:
- if there is a real, and demonstrable, technical need for a threshold level, then it should be fixed. Where a technical specification covers more than one intended use, different threshold levels may be necessary for each category of use;
 - threshold levels must not be used by specification writers to exclude existing products that are already legally placed on the European market. It follows that minimum levels of performance should not be above the lowest currently accepted level in the European Union;
 - threshold levels must not be used to exclude products that could be considered fit for some intended uses but not all (it is clear, however, that levels for specific intended uses will exclude products that cannot ever be considered fit for that use);
 - threshold levels must not be used as an arbitrary means of discrimination between products or producers. Competing products shall not be excluded from the scopes of technical specifications, unless there are important and justified reasons for doing so.
 - finally, the search for consensus on a given level of product performance should **not** hold up the delivery of the technical specification.

¹¹ Note, however, that Article 5.1 of the CPD constitutes a “technical” safeguard clause on the content of European technical specifications. Further, Article 20.1 permits the SCC to examine any question posed by the implementation and practical application of the CPD and Article 9.2 foresees a role for the SCC if EOTA cannot agree on a ETA without Guideline.

- 3.12 Given the *de facto* compulsory nature of existing European technical specifications under the CPD ¹², specification writers abusing the above principles may be subject to action under Articles 81 (e.g. concerted practices having the effect of distorting competition) and 82 (e.g. abuse of dominant position to limit markets) of the EC Treaty.
- 3.13 Where the threshold levels of product performance fixed in technical specifications are minimum European values, not enabling the fitness for a specific intended use in a particular Member State to be established, the actual performance of the product will also have to be declared with the CE marking. This is not the case for levels set by pass/ fail tests, as compliance with the technical specification will demonstrate that a product has passed a given test.

4. Classes of product performance

Definition and analysis :

- 4.1 A quantitative expression of the behaviour of a construction product, for an action to which it is subject or which it generates under the intended use conditions, expressing the range of performance levels of a product in relation to the Essential Requirements. Classes can refer to the product as whole or to individual characteristics or combinations of characteristics.
- 4.2 Each Essential Requirement may give rise to the establishment of classes in the technical specifications. The Interpretative Documents (*Section 1.2 of each ID*) distinguish between two types of classes of product performance : those which are identified as the means of expressing the range of requirement levels of the works, arising from differences specified in Article 3(2) of the CPD (hereafter called “**regulatory**” classes of product performance) and those which aren’t (hereafter called “**technical**” classes of product performance).
- 4.3 Regulatory classes may be necessary where there is a correspondence between the performance of the works and that of the product itself (i.e. the requirements on the works are directly expressed as a function of product performance). Such classes shall be established according to the procedure foreseen by Article 20(2) of the CPD. The range of levels covered by these classes depends upon the existing and justified levels encountered in the Member States. The provisions of Article 6(3) of the CPD apply to regulatory classes, obliging Member States to use them if specifying performance levels to be observed on their territory.
- 4.4 Technical classes, often referred to as “classes of convenience”, are classes of product performance established as a means of convenience for specifiers, manufacturers and purchasers where justified differences specified in Art. 3(2) of the CPD have not been identified or where a classification of product performance has not been identified as the means of expressing the range of requirement levels of the works. They are intended to make it easier to use the technical specification to relate

¹² Note, however, that Article 4.4 of the CPD provides for the situation where a producer has not applied, or has applied only in part, a technical specification, for a product whose attestation of conformity falls under systems 3 or 4. In addition, Article 8.2.b permits an ETA to be granted for products which differ significantly from harmonised standards.

a product's performance to its intended use (*I.D.s section 1.2*). Where necessary, specification writers may establish such classes themselves, keeping the Commission and the Standing Committee informed. They are not classes according to Article 3(2) of the CPD and Article 6(3) does not apply (i.e. Member States are not obliged to refer to technical classes when setting performance levels to be observed on their territory, but may do so if they see fit).

- 4.5 Nevertheless, technical classes for mandated product characteristics would form an integral part of the technical specifications (e.g. the harmonised normative part of a European standard to which its Annex ZA refers) and would be used as the means of expressing the performance of the product in the information accompanying the CE marking. They would thus be obligatory for producers complying with the technical specification (but see paragraph 4.13 for a derogation from this principle).

Examples :

- 4.6 *Regulatory classes* – ER2, reaction to fire – there is a direct link between the ER and the performance of construction products, in terms of the combined influence of a number of characteristics (i.e. the requirements on the works are directly expressed as a function of product performance). All 15 Member States use a classification of product performance as the means of expressing the range of requirement levels of the works. The different classification systems and test methods in use constitute technical barriers to trade and thus need to be harmonised at a European level.
- 4.7 *Technical classes* – the “strength” classes of cement, for which the technical need derives from the continuous nature of the production process and the related sampling and testing regimes. Such classes have not been identified as the means of expressing the range of requirement levels of the works and have thus not been proposed as regulatory classes. They are , however, necessary to achieve the objective of the standard and may be referred to in national provisions, if appropriate.
- 4.8 “*Non-classes*” – technical specification writers often use the term “classes” to cover many different aspects of a product's performance and use. Many of these so-called classes are in fact “*intended use categories*” (e.g. sootfire resistance “classes” for chimneys – with or without), “*exposure conditions*” (e.g. exposure “classes” XC1 (dry), XC2 (wet, rarely dry) etc for concrete) or even “*product types*” (e.g. “classes” of cement type CEM I, CEM II etc). It would help considerably if such descriptors were no longer referred to as “classes”.

Guidance for technical specification writers :

- 4.9 Where classes of product performance are identified as the means of expressing the range of requirement levels of the works, arising from differences specified in Article 3(2) of the CPD, specification writers may submit a justified proposal for the establishment of regulatory classes to the Commission, which will consider the request. If appropriate, the Commission will submit a draft of the measures to be taken to the SCC, according to the procedure of Article 20(2) of the CPD.

4.10 As regards technical classes, specification writers may, subject to the conditions of paragraph 4.11 being fulfilled, establish such classes themselves, keeping the Commission and the Standing Committee informed.

4.11 Where classes of product performance are established, certain principles must be adhered to, as follows :

- there must be a real, and demonstrable, technical or regulatory need for classes. A technical need may arise, for example, from the use of a particular test method, the nature of the production process or the different intended uses of a product;
- technical classes must be compatible with the existing national provisions of all of the Member States (i.e. the existing levels in the Member State must be taken into account in the definition of technical classes) ¹³;
- the classification must not be used to exclude existing products that are already legally placed on the European market; It follows that minimum class levels should not be above the lowest currently accepted level in the European Union;
- the classification must not be used to exclude products that could be considered fit for some intended uses but not all;
- classes must not be used as an arbitrary means of discrimination between products or producers;
- classes must not be used to artificially partition the European market (i.e. classes that, in effect, define market segments must have a sound basis linked to the satisfaction of the Essential Requirements);
- a “no performance determined” class shall be set up, if at least one Member State has no legal requirement relating to a specific intended use. However, the provisions of paragraph 3.6 should also be adhered to in setting up such classes;
- in addition, care should be taken that classes do not interfere with the design process. Often, an exact or characteristic value for a particular aspect of a product’s performance is needed to be able to carry out the required calculations;
- finally, the search for consensus on a given classification system should not hold up the delivery of the technical specification.

4.12 It is clear from the above conditions that classes of product performance, particularly technical classes, should be considered to be the exception rather than the rule and should only be established where necessary to achieve the objective of the technical specification and the CPD. The provisions of paragraph 3.12 also apply to technical classes.

4.13 *Note* : so as not to hold up the delivery of European technical specifications, it is recognised that some specification writers have already defined “optional” classes of product performance that may be used as an alternative to the declaration of a

¹³ This provision does not apply to regulatory classes, for which the Member States are obliged to adapt their national provisions.

performance value. Whilst this element of choice indicates that such classes are not necessary from a technical point of view, their use does not conflict with the objectives of the CPD and can thus be accepted. However, in such cases, the determined value of the characteristic shall always be declared with the CE marking, either on its own or accompanying the declared class¹⁴.

5. National provisions on works and parts thereof

Principles :

- 5.1 Member States are responsible for ensuring that building and civil engineering works on their territory are designed and executed in a way that does not endanger the safety of persons, domestic animals and property, while respecting other essential requirements in the interests of general well-being. (*CPD 1st Whereas*)
- 5.2 National provisions on the design and execution of construction works have consequences for the required performance of construction products, as the latter have to be fit for use in such works. These national provisions vary throughout Europe because of, *inter alia*, differences in the philosophy of regulation, the definition of criteria and the required levels of protection. In the short term, it is not foreseen to harmonise such national provisions on the design and execution of works. Differences in geographical or climatic conditions or in ways of life also lead to justified differences in national provisions and these aspects cannot be harmonised.
- 5.3 Fitness for use means that a product has such characteristics that the works in which it is to be incorporated, assembled, applied or installed, can, if properly designed and built, satisfy the essential requirements of the CPD (*Article 2(1) of the CPD*). In the absence of harmonisation at a European level, the fitness for use of construction products can only be properly assessed within the context of national provisions on the design and execution of works and parts thereof. For the time being, therefore, fitness for use is primarily a national level concept rather than a European one. Similar types of works in different Member States may have different performance requirements, resulting in different demands being made on construction products.
- 5.4 It follows that where national provisions on the design and execution of works relating to the Essential Requirements are expressed in terms of product performance, Member States may regulate on the required levels of performance of construction products for specific intended uses ¹⁵. This principle applies whether or not regulatory classes of product performance have been established ¹⁶. Given the complex interaction between works and products, this will inevitably lead to

¹⁴ If the determined value is not declared, then it can be assumed to be equal to the lower limit of the given class.

¹⁵ Such levels must refer to harmonised characteristics and European methods of determination rather than national ones and shall not constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.

¹⁶ Article 6(3) of the CPD obliges Member States to use regulatory classes **if** they have been established at a European level. If such classes have not been fixed, then Article 6(3) does not apply. This article is frequently (mis)interpreted to mean that Member States can only set performance levels if classes have been established. This is incorrect. The existence of classes does not establish a principle, but is merely an example of its application.

situations in which a given product cannot be used in the same application throughout Europe, even though it bears the CE marking. The CE marking and the accompanying information will, however, permit the fitness for use for a given use in a given Member State to be established, without any further procedures, tests or conformity evaluation being required.

- 5.5 Article 6(1) of the CPD states that “*Member States shall not impede the free movement, placing on the market or use of products which satisfy the provisions of this directive*”. In order to satisfy the provisions of the directive, products have to be fit for use, which, as stated above, currently depends on national provisions on the design and execution of works. The term “*or use*” in Art. 6(1) is intended to prevent the erection of artificial barriers to the use of construction products and does not remove the possibility for Member States to regulate on the design and execution of works or parts thereof, on the basis of the differences specified in Article 3(2) of the CPD.
- 5.6 It should, however, be noted that the Member States’ right to regulate does not extend to the systems of attestation of conformity for construction products, which are fixed under European law (principle of direct application).

Examples :

- 5.7 *Wall coverings (reaction to fire) :* Member State(1) requires wall coverings in hotel escape routes to be Euroclass A2 or better, whereas Member State(2) requires wall coverings in hotel escape routes to be Euroclass A1. Thus, class A2 products that are fit for use in hotel escape routes in the first Member State will not be considered fit for that same use in the second.
- 5.8 *Road safety barriers :* the performance requirements for road safety barriers will vary according to, for example, the type of road and it is clear that not all CE marked safety barriers will have the required performance for all types of road. If the definitions of, for example, road types and requirements are not harmonised throughout Europe, then the acceptable use of products will necessarily be governed by national provisions on the design and execution of works. Again, fitness for use is a national level concept rather than a European one.

ANNEX – OVERVIEW OF CLASSES AND LEVELS IN THE CPD

Works	Interpretative Documents	Products
<p>Design and execution – competence of Member States. <i>1st whereas</i></p> <p>Works must satisfy Essential Requirements (where subject to provisions containing such requirements). <i>Art. 3(1) and Annex I</i></p> <p>Essential Requirements have an influence on the technical characteristics of products. <i>Art. 3(1)</i></p> <p>Member States may have different levels of essential requirement (due to differences in geographical or climatic conditions, ways of life and level of protection). <i>Art. 3(2)</i></p> <p>Classes of essential requirement may be needed to take account of the above differences in levels of requirement. <i>Art. 3(2)</i></p> <p>Levels of essential requirement are analogous to classes.</p> <p>Positive SCC opinion required to establish classes of essential requirement. <i>Art. 20(2)(a)</i></p> <p>Obligation on Member States to use classes of essential requirement to set performance levels, <u>if</u> they have been established. <i>Art. 6(3)</i></p>	<p>Give concrete form to the Essential Requirements on the works, indicating classes or levels for each requirement where necessary. <i>Art. 12(2)(a)</i></p> <p>Indicate methods of correlating <u>these</u> classes or levels of requirement with the technical specifications (e.g. methods of calculation and proof, technical rules for project design etc). <i>Art. 12(2)(b)</i></p> <p>Classification of product performance may be identified as the <u>means</u> of expressing the range of requirement levels of the <u>work</u>, on the basis of differences specified in Art 3(2) – “regulatory” classes. <i>IDs para 1.2.1</i></p> <p>Positive SCC opinion required to establish regulatory classes. <i>Art. 20(2)(a)</i></p> <p>Otherwise, “technical” classes of product performances could be established to make it easier to use the technical specification to relate product performance to its intended use. <i>IDs para 1.2.2</i></p> <p>If needed, such technical classes would be established by specification writers, keeping the Commission and the SCC informed. <i>IDs para 1.2.2</i></p> <p>They form an integral part of the technical specifications.</p>	<p>Play a part with respect to the Essential Requirements. <i>Art. 13(4)(a)</i></p> <p>Must be fit for use – i.e. have such characteristics that the works, if properly designed and built, can satisfy the Essential Requirements. <i>Art. 2(1) and 4(2)</i></p> <p>Fitness for use is thus related to the characteristics of the product, the part played with respect to the ERs and national provisions on the design and execution of works (i.e. there is a national dimension to the definition of fitness for specific uses).</p> <p>Products need to be properly defined, which may give rise to threshold levels on composition or performance.</p> <p>Threshold levels may also be necessary to guarantee a minimum product performance, below which it could not be considered fit for a specific intended use.</p> <p>Products must comply with technical specifications. <i>Art. 4(2)</i></p> <p>The above threshold levels of product performance thus form an integral part of the technical specifications.</p>