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GUIDANCE PAPER A

(concerning the Construction Products Directive 89/106/EC)

THE DESIGNATION OF NOTIFIED BODIES IN THE FIELD OF THE CONSTRUCTION PRODUCTS DIRECTIVE

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Preface

Article 20 of the Construction Products Directive (89/106/EC) 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.

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They may be further elaborated, amended or withdrawn by the same procedure leading to their issue.

THE DESIGNATION[1] OF NOTIFIED[2] BODIES IN THE FIELD OF THE CONSTRUCTION PRODUCTS DIRECTIVE

1. Objectives and scope

1.1 This document is intended to provide guidance for Member States when designating and notifying bodies to operate the attestation procedures required under Article 18 of the Construction Products Directive (CPD). This Guidance Paper (GP) does not deal with the operation of Special Procedures (Article 16 of the Directive) or with market surveillance operations.

1.2 The principal objectives are:
to ensure the full implementation of the CPD, taking account of the specific aspects of the CPD and the requirements of the Council Resolution on a Global Approach to Conformity Assessment[3] and other relevant horizontal documents.

to define criteria that allow equivalent assessment of applicant bodies by Member States.

to provide information to Member States on the elements that need to be communicated to the Commission and the other Member States about the individual notifications.

to ensure that full information is available to all interested parties, on the scope and competence of notified bodies and the services provided.

1.3 This document is not itself directly applicable. But its provisions should be applied by Member States in the process of designation and notification.

2. The Legal Basis

2.1 The legal basis[4] applicable to the designation of notified bodies under the CPD is set out in Article 18 and Annex IV of the directive. This GP refers to the Council Resolution of 21.12.89 on a Global Approach to Conformity Assessment and to the "Guide to the implementation of directives based on new approach and global approach" (most recent version, 1999 referred to as "the Guide" in the text), the general provisions of which also apply to the notification process.

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1 For this paper, designation can be described as being the internal assessment and approval process of the candidate Notified Bodies by the Member State.

2 To avoid confusion with the terminology used for organisations designated by member states under article 10 of the construction Products Directive (Approval Bodies) the Commission Services propose to use of the term "Notified Body" for Bodies notified under article 18 of the CPD, thus avoiding the term 'Designated Body'.

3 OJ C10, 16.10.1990

4 http://ec.europa.eu/enterprise/newapproach/legislation.htm

The general procedures laid down at Community level and described in the Commission document "Methods of co-ordinating the procedures governing the notification and management of notified bodies[5]" have also been taken into account.

3. Implementation of the criteria for the designation of notified bodies

3.1 Main responsibilities of Member States

(a) It is the responsibility of individual Member States to ensure that the criteria set out in Annex IV of the CPD are fully satisfied by notified bodies. Member States may notify to the Commission only bodies that conform to these criteria as a minimum requirement.

(b) Member States may consider for designation and notification only those product certification bodies, factory production control certification bodies, inspection bodies, and testing laboratories that come under their jurisdiction and which therefore are established in their territory (Guide, Section 6.1, 3rd bullet point).

(c) Should a Member State find that a body it has notified ceases to fulfil the conditions of notification, it should inform the body concerned, the Commission and the other Member States. A Member State shall withdraw notification if the body continues to not fulfil these conditions. Such withdrawal does not affect previous attestation work performed by that body unless it is shown that the work is no longer valid (Guide, Section 6.2.2 paras 2 and 3).

(d) Where a Member State withdraws its notification of a body, it shall take appropriate steps to ensure that another notified body processes dossiers of the body concerned in order to ensure continuity (Guide, Section 6.2.2 para 4).

(e) Annex F gives the information and conditions that Member States should check and include in the letters of designation to applicant bodies. Annex G gives the standard letter of notification to the Commission (and the other Member States) that Member States should use, after an identification number has been issued by the Commission services to the applicant body.

3.2 Interpretation of Annex IV of the Directive

(a) Compliance, demonstrated to the notification authority concerned, with the relevant requirements from the appropriate standards in the EN 45000 series (made specific to the requirements of the task and/or product(s) in question), together with proof of civil liability insurance, is considered as satisfactory demonstration of compliance with the criteria contained in Annex IV of the CPD.

(b) The Member States agree to verify at intervals the minimum conditions of all conditions set out in Annex IV of the Directive and not just conditions 1 and 2.

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[5] CERTIF 93/1 Rev 3.

(c) When the Commission and the Member States have doubts about the competence of a notified body, it is their responsibility to act (Guide, Section 6.2.2 para 1). In such cases, the Commission may request, from the Member State concerned, appropriate documented evidence of the basis for notification.

3.3 Basis for assessments of notified bodies

(a) The standards that should be used as a basis for proof of compliance, within a defined scope of demonstrated competence, with the requirements of Annex IV are:

For bodies performing product certification:	EN 45011 "General requirements for certification bodies operating product certification systems"
For bodies performing FPC certification:	EN 45012 "General requirements for certification bodies operating assessment and certification oblige/registration of quality systems" And/or EN 45011
For bodies performing FPC inspection:	EN 45012 And/or EN ISO/IEC 17020 "General criteria for the operation of various types of bodies performing inspection"
For testing laboratories:	EN ISO/IEC 17025:2000 “General requirements for the competence of testing and calibration laboratories”

Note:

i) There being no unanimous agreement among Member States on the use of EN 45012, Member States may use the relevant clauses of EN 45011 and/or EN ISO/IEC 17020:2004 as the basis for demonstrating satisfaction of the requirements of CPD Annex IV as an alternative.

ii) In some member states the concept of inspection bodies does not apply under the CPD since all tasks related to FPC certification are carried out by a single FPC certification body. In other member states, FPC inspection bodies are subcontracted by an FPC certification body to carry out parts of the work for which the FPC certification body is itself ultimately responsible.

iii) For CE marking under the CPD, quality systems certification is not mandatory.

(b) Not all parts of the above standards are essential to demonstrate compliance with Annex IV. The requirements of Annex IV of the CPD can be demonstrated by compliance with those criteria listed in:

Annex A	for product certification bodies
Annex B	for FPC certification bodies
Annex C	for inspection bodies
Annex D	for testing laboratories
Annex E	for third parties performing calculation.

Those clauses of the relevant EN 45000 standards (or EN ISO/IEC 17025:2000 and EN ISO/IEC 17020:2004) that are not mentioned in these annexes are not a necessary requirement of the CPD.

(c) The tasks of bodies involved in FPC inspection and/or certification relate only to those aspects of an FPC system needed to satisfy the requirements of the CPD and as defined in Guidance Paper B "The definition of factory production control in technical specifications for construction products".

(d) In notifying a body to the Commission, a Member State must ensure that the body has the necessary specific product knowledge and certification/inspection and/or testing capability (Guide, section 6.1, 3rd bullet point, and para 3).

For certification and inspection bodies this is preferably demonstrated by reference to the title(s) and scope(s) of harmonised European technical specifications and/or Guidelines for European Technical Approvals (ETAGs). For test laboratories it is most easily demonstrated by reference to European test standards or parts thereof or by reference to test methods required for ETAGs.

(e) The versions of reference of the standards that have been used are EN 45012:1998, EN 45011:1998, EN ISO/IEC 17020:2004, EN ISO/IEC 17025:2000.

3.4 Sub-contracting by notified bodies

(a) The following summarises the conditions under which a CPD notified body may sub-contract (see also point 4.11). For a more complete account, see the Guide, section 6.5.

A notified body can have part of its work carried out by another body on the basis of established and regularly monitored competence.

The body subcontracted by the notified body must be technically competent, and display independence and objectivity according to the same criteria and under the same conditions as the notified body. However, notification of subcontractors is not necessary. The Member State that has notified the body which subcontracts part of its work, must ensure effective monitoring of the competence of both notified and non-notified bodies.

The notified body shall keep a register of all its subcontracting activities, and update it systematically. The notified body shall ensure that its subcontractors have the necessary competence and that they maintain this competence. This information shall be available to the notifying authority.

A further condition for subcontracting is that the conformity assessment procedure can be subdivided into technical operations and assessment operations, and that the methodology used to carry out the technical operations is sufficiently precise. The body subcontracted by the notified body must, nevertheless, carry out substantial and coherent parts of these technical operations.

Subcontracting must be based on a contract, which makes it possible to ensure transparency and confidence of the notified body's operations.

A subcontracting notified body remains responsible for all the activities covered by the notification. Subcontracting does not entail the delegation of powers or responsibilities.

Certificates are always issued in the name and under the responsibility of the notified body. The notified body cannot under any circumstances subcontract all of its activities, as that would make the notification meaningless.

> Notified bodies may for example subcontract tests while continuing to assess their results and, in particular, to validate the test report in order to evaluate whether the requirements of the directive are met. Similarly, subcontracting is possible in the field of certification of FPC systems by using external persons as auditors, provided that the notified body carried out the evaluation of the audit results.

Serial subcontracting (subcontracting by the subcontractor) is prohibited in order to avoid undermining the coherence of the system and the confidence in it.

The conditions for subcontracting apply to any subcontractor whether or not established within the Community.

Note that although it is not necessary to notify subcontractors (see bullet point 2 above), the Commission encourages their notification under the CPD. This has a number of advantages, for example increasing transparency, opening up competition, allowing such bodies to appear on the Commission web site, and allowing them to participate in the work of the Group of Notified Bodies.

3.5 Notified bodies linked to a manufacturer

(a) The Guide (Section 6.3) includes the following provisions:

"Notified bodies are and must remain third parties independent of their clients and other interested parties".

"The structure of the body shall safeguard impartiality, especially if the body has other activities than those as a notified body. Further, the body shall have policies and procedures that distinguish between the tasks carried out as a notified body and any other activity in which the body is engaged, making this distinction clear to their customers."

"To safeguard objectivity, impartiality and operational integrity the body and its staff (whether directly employed or subcontracted) responsible for the activities carried out as a notified body may, for instance, neither be the manufacturer, his authorised representative, a supplier or their commercial competitor…."

(b) This general principle should be applied as far as possible to all notified bodies. However, it has to be recognised that in some cases it might be impossible to avoid notifying a body which is in some way linked to a manufacturer.

In these cases the concern is to ensure that the laboratory operates in a totally impartial way. The organisation must, of course, satisfy the criteria of CPD Annex IV. The notifying Member State should also, however, pay particular attention to the criterion of impartiality. The closer the relationship between the laboratory and the production unit, the stricter will have to be the means of satisfying the impartiality requirement and the stringency with which this is verified and policed.

This is dealt with in EN ISO/EIC 17025:2000, clause 4.1.4, which states “When products are tested by bodies (e.g. manufacturers) who have been concerned with their design, manufacture or sale, provision for a clear separation of different responsibilities and an appropriate statement shall be made.” Once notified, however, such a body would be entitled to undertake attestation operations for any client including those for its parent body.

3.6 Civil liability insurance

(a) Annex IV of the Directive requires that notified bodies should subscribe to civil liability insurance unless the liability is covered by the State under national law (with due regard to the principles of the Treaty). It is considered that the reference to "civil liability insurance" should be assumed to be a reference to professional indemnity insurance.

(b) The EN 45000 standards contain no requirements for insurance and the CPD provides no guidance on the value of insurance cover to be maintained. Member States should require notified bodies to provide annual evidence of adequate professional indemnity insurance cover, taking account of the turnover and nature of the risks likely to be incurred by the body concerned.

4. The process of notification

4.1 " Member States shall notify the Commission and the other Member States of the certification and inspection bodies and the testing laboratories which they have designated for the tasks which must be carried out for the purposes of technical approval, certificates of conformity, inspections and tests, in accordance with this Directive, together with their names and addresses and the identification numbers assigned to them beforehand by the Commission. Member States shall indicate the products which fall within the competence of the bodies and laboratories and the nature of the tasks to be assigned to them” (CPD Article 18).

The Commission is responsible for publishing and keeping up to date a list of bodies and their competencies.

4.2 The relevant attestation of conformity decision is the basis for identifying the scope of the notification. Member States are strongly recommended to stick exactly to the wordings used in the relevant AoC decision when selecting the product range of the notification. The nature of the tasks can be limited to 4 choices: product certification, certification of factory production control system, inspection of factory production control system, testing

4.3 Member States are free to notify at any time. It will usually be inappropriate, however, to notify before the adoption of the decision on the system of attestation of conformity for the product or product family in question. Member States should as precise as possible align the scopes of the notifications with the relevant attestation of conformity decision, the relevant harmonised standards or ETA Guidelines/ETAs, or appropriate test methods.

4.4 In advance of availability of finalised harmonised technical specifications or test standards, some member states prefer to provisionally notify their attestation bodies. Just as for fully notified bodies, provisionally notified bodies have to participate in co-ordination work at European level, through the Group of Notified Bodies.

4.5 It is the responsibility of the Member States to notify any changes, including withdrawal of notification, to the Commission.

4.6 Member States should, in addition to any continuous surveillance they may wish to undertake, regularly seek confirmation of the fulfilment of the terms and conditions by the bodies it notifies. It is recommended that this should be done at least once every four years but may be done more frequently.

4.7 There is no limit on the number of bodies that can be notified to undertake a given test or to certify FPC or product conformity for a given product. There is also no limit on the number of types of tests and/or product assessments for which any one body can be notified. A body can apply for designation against any of the tasks described in CPD Annex III Section 2, or any combination of these, provided that it meets the requirements of competence for each task.

4.8 Notification of bodies to the Commission does not automatically mean that tasks performed by them can lead to the affixing of the CE marking. Such CE marking can only take place once all the necessary conditions have been fulfilled, i.e. the availability of a harmonised technical specification together with all the necessary test and/or assessment methods.

4.9 Fully and provisionally Notified Bodies must accept the commitment to the development of practical attestation procedures at European level. This will involve regular co-operation with other notified bodies on a technical level and exchange of relevant information in the notified field of activity, with the aim of creating confidence through the harmonisation of practices and ensure reproducibility of attestation results.

4.10 The forum for this co-operation is the Group of Notified Bodies (GNB) for the CPD. All notified bodies are automatically a member of this group and in particular a member of one or more of its sector groups. Notified Bodies will take the results of the work of the GNB into account.

4.11 Notified Bodies need to be able to demonstrate that they are actively involved in the activities of the GNB. Lack of involvement will lead to the withdrawing of the notification by the notifying authorities.

4.12 Where a body seeking notification proposes to sub-contract a part of its activities, a list of sub-contractors which it may use must be kept and systematically updated by the body. Any change to this list should be considered as a change to the terms of the notification, and must therefore be made known to the Member State. The list of sub-contractors should be available without delay to the Commission and other Member States if requested, but there is no requirement for such sub-contractors to be themselves notified.

4.13 A body appearing on a list of sub-contractors may itself be a notified body for the same tasks for which it is a sub-contractor, or for other tasks.

4.14 The scope of the notifications of the Notified Bodies will be made publicly available on NANDO[6]. Only notifications that follow the publication of the title and reference of the relevant harmonised EN or ETAG in the OJEU (no pre-notification) will be included in the NANDO Database.

[6] http://ec.europa.eu/enterprise/newapproach/nando

ANNEX A: INTERPRETATION OF ANNEX IV REQUIREMENTS FOR BODIES CARRYING OUT PRODUCT CONFORMITY CERTIFICATION

A1. The requirements set out in Annex IV of the CPD are considered to correspond to the following clauses in EN 45011:1998. The application of this standard should take account of the size and complexity of the organisation being assessed and of the tasks that it wishes to carry out, and should not lead to the imposition of unnecessary bureaucracy.

Annex IV Criteria		Relevant Clauses of : EN 45011
IV.1 Availability of:	personnel	4.2 Organisation: (j) 5 Certification body personnel 9 Preparation for evaluation : 9.3
	means and equipment	Where the certification body operates its own testing and/or inspection activities, these activities shall conform with the relevant requirements of EN ISO/IEC 17025 and EN 45012/EN ISO/IEC 17020:2004. Also see "IV.2 Technical competence" below.
IV.2 Technical competence		4.1 General provision 4.1.3, 4.1.4 4.2 Organisation (b) (c) (f) (k) (l) (p) 4.3 Operations 4.4 Subcontracting 4.5 Quality system 4.6 Conditions and procedures for granting, maintaining, extending, suspending and withdrawing certification 4.7 Internal audits and management reviews 4.8 Documentation on: 4.8.1(a) (b) (c) (d) (f), 4.8.2 4.9 Records 7 Appeals, complaints and disputes 9 Preparation for evaluation: 9.1, 9.4 10 Evaluation 11 Evaluation report 12 Decision on certification 13 Surveillance: 13.1, 13.2, 13.3
Professional Integrity		4.2 Organisation: l (m) (n)
IV.3 Impartiality		4.1 General provisions: 4.1.1, 4.1.2 4.2 Organisation: (a) (e) (o) 4.4 Subcontracting 4.9 Records: 4.9.1 9 Preparation for evaluation: 9.3
IV.4 Professional secrecy		4.2 Organisation: (0) 4.4 Subcontracting 4.9 Records: 4.9.1 4.10 Confidentiality

A.2 The above clauses provide the basis for assessment against the Annex IV criteria. However, in order to comply fully with the requirements of Article 18 and also to promote mutual confidence in the assessment process the following requirements should also apply:

- **Scope of designation :**
  This should be defined in relation to harmonised technical specifications and/or Guidelines for ETAs recognised for the purposes of the CPD.

- **Method of assessment :**
  Assessment must be made against the Annex IV criteria.

  This may be achieved through a formal accreditation scheme by a recognised accreditation body, based on EN 45011, plus the specific requirements of the CPD and the harmonised technical specification for the product concerned.

ANNEX B: INTERPRETATION OF ANNEX IV REQUIREMENTS FOR BODIES CARRYING OUT FPC CERTIFICATION

B1. The requirements set out in Annex IV of the CPD are considered to correspond to the following clauses in EN 45012:1998. The application of this standard should take account of the size and complexity of the organisation being assessed and of the tasks that it wishes to carry out, and should not lead to the imposition of unnecessary bureaucracy.

Where clauses in EN 45012 refer to quality systems, these should be interpreted as FPC systems as defined under the CPD.

Annex IV Criteria		Relevant Clauses of : EN 45012
IV.1 Availability of:	personnel	2.1.2 Organisation: (j) 2.2 Certification/registration body personnel
	means and equipment	Covered by "IV.2 Technical competence" below
IV.2 Technical competence		2.1.1 General provisions: 2.1.1.3,4 2.1.2 Organisation: (b) (c) (f) (k) (l) (p) 2.1.3 Subcontracting 2.1.4 Quality system 2.1.5 Conditions for granting, maintaining, extending, reducing, suspending and withdrawing certification/registration: 2.1.5.1,3,4 2.1.6 Internal audits and management reviews 2.1.7 Documentation: 2.1.7.1(a) (b) (c) (d) (f); 2.1.7.2 2.1.8 Records 2.4 Appeals, complaints and disputes 3.2 Preparation for assessment 3.3 Assessment 3.4 Assessment report 3.5 Decision on certification/registration 3.6 Surveillance and reassessment procedures (In addition, the certification body shall require the supplier to inform it of any changes which may affect the conformity of the product)
	Professional Integrity	2.1.2 Organisation: (m) (n) 2.1.3 Subcontracting 2.1.8 Records: 2.1.8.1 2.2 Certification/registration body personnel: 2.2.3.2(f); 2.2.4
IV.3 Impartiality		2.1.1 General provisions: 2.1.1.1,2 2.1.2 Organisation: (a) (e) (o) 2.2 Certification/registration body personnel, 2.2.3.2(f); 2.2.4
IV.4 Professional secrecy		2.1.2 Organisation: (o) 2.1.3 Subcontracting 2.1.8 Records: 2.1.8.1

2.1.9 Confidentiality

B.2 The above clauses provide the basis for assessment against the Annex IV criteria. However, in order to comply fully with the requirements of Article 18 and also to promote mutual confidence in the assessment process the following requirements should also apply:

- **Scope of designation :**
  This should be defined in relation to harmonised technical specifications and/or Guidelines for ETAs recognised for the purposes of the CPD.

- **Method of assessment :**
  Assessment must be made against the Annex IV criteria.

  This may be achieved through a formal accreditation scheme by a recognised accreditation body, based on EN 45012, plus the specific requirements of the CPD and the harmonised technical specification for the product concerned.

ANNEX C : INTERPRETATION OF ANNEX IV REQUIREMENTS FOR INSPECTION BODIES

C1. The requirements set out in Annex IV of the Directive are considered to correspond to the following clauses in EN 45012:1998 (see below for the relevant clauses of EN ISO/IEC 17020:2004). The application of this standard should take account of the size and complexity of the organisation being assessed and its technical scope and should not lead to the imposition of unnecessary bureaucracy. The tasks of FPC inspection are somewhat different to those of FPC certification and EN 45012 should be applied with this difference in mind. Where relevant, references in EN 45012 to "certification" and/or "registration" should be read as "inspection". Where relevant, references to certificates should be read as inspection reports since inspection bodies do not issue certificates.

Annex IV Criteria		Relevant Clauses of : EN 45012
IV.1 Availability of:	personnel	2.1.2 Organisation: (j) 2.2 Certification/registration body personnel
	means and equipment	Covered by "IV.2 Technical competence" below.
IV.2 Technical competence		2.1.1 General provisions: 2.1.1.3,4 2.1.2 Organisation: (c) (f) (k) (l) (p) 2.1.3 Subcontracting (a) (b) 2.1.4 Quality system 2.1.5 Conditions for granting, maintaining, extending, reducing, suspending and withdrawing certification/registration: 2.1.5.4 2.1.6 Internal audits and management reviews 2.1.7 Documentation: 2.1.7.1(a) (c) (d) (f); 2.1.7.2 2.1.8 Records 2.4 Appeals, complaints and disputes 3.2 Preparation for assessment 3.3 Assessment 3.4 Assessment report
Professional Integrity		2.1.2 Organisation: (m) (n) 2.1.3 Subcontracting (a) (b) 2.1.8 Records: 2.1.8.1 2.2 Certification/registration body personnel: 2.2.3.2(f); 2.2.4
IV.3 Impartiality		2.1.2 Organisation: (a) (e) (o) 2.2 Certification/registration body personnel, 2.2.3.2(f); 2.2.4
IV.4 Professional secrecy		2.1.2 Organisation: (o) 2.1.3 Subcontracting 2.1.8 Records: 2.1.8.1 2.1.9 Confidentiality

C2. Where assessment is based on EN ISO/IEC 17020:2004 the following clauses of that standard are considered relevant (note that, for Clause 13 of EN ISO/IEC 17020:2004, it is only the aspect relating to inspection reports that is relevant).

Annex IV Criteria		Relevant clauses of EN ISO/IEC 17020	
IV.1	Availability of : personnel	8	Personnel
	means	10	Inspection methods and procedures
	equipment	9	Facilities and equipment
IV.2	Technical competence	3.3	Documentation
		6	Organisation and management
		7	Quality system
		10	Inspection methods and procedures
		11	Handling inspection samples and items
		12	Records
		13	Inspection reports [and inspection certificates]
		15	Complaints and appeals
	Professional integrity	4	Independence, impartiality and integrity
IV.3	Impartiality	4	Independence, impartiality and integrity
IV.4	Professional secrecy	5	Confidentiality
IV.5	Civil liability insurance	3.4	Administrative requirements

C3. The above clauses provide the basis for assessment against the Annex IV criteria. However, in order to comply fully with the requirements of Article 18 and also to promote mutual confidence in the assessment process the following requirements should also apply:

- **Scope of designation :**

  This should be defined in relation to harmonised technical specifications and/or Guidelines for ETAs recognised for the purposes of the CPD.

- **Method of assessment :**

  Assessment must be made against the Annex IV criteria.

  This may be achieved through a formal accreditation scheme, by a recognised accreditation body, based on EN 45012 or alternatively on EN ISO/IEC 17020:2004, plus the specific requirements of the CPD and the harmonised technical specification for the product concerned.

ANNEX D : INTERPRETATION OF ANNEX IV REQUIREMENTS FOR TESTING LABORATORIES

D1. The requirements set out in Annex IV of the Directive are considered to correspond to the relevant clauses in EN ISO/IEC 17025:2000 "General requirements for the competence of testing and calibration laboratories". The application of either of these standards should take account of the size and complexity of the organisation being assessed and its technical scope and should not lead to the imposition of unnecessary bureaucracy.

a) Relevant clauses of EN45001:1989

Annex IV Criteria		Relevant clauses of EN ISO/IEC 17025	
IV.1	Availability of : personnel	5.2	Personnel
	means	5.3.1.	Availability
		5.3.2.	Premises and Environment
	equipment	5.3.3	Equipment
IV.2	Technical competence	5	Technical Competence
	Professional integrity	4	Impartiality, independence and integrity
IV.3	Impartiality	4	Impartiality independence and integrity
IV.4	Professional secrecy	5.4.6	Confidentiality and security

b) Relevant clauses of EN ISO/IEC 17025:2000

Annex IV Criteria		Relevant clauses of EN ISO/IEC 17025
IV.1	Availability of : personnel	4.1 Organisation: 4.1.5 a, f, g 5.2 Personnel
	Means	4.1 Organisation: 4.1.5 h 4.5 Subcontracting of tests and calibrations 4.6 Purchasing services and supplies 5.3 Accommodation and environmental conditions
	Equipment	5.5 Equipment 5.6 Measurement traceability: 5.6.1 General: 5.6.2.2 Testing (labs) 5.6.3 Reference standards and reference materials

IV.2	Technical competence	4.1 Organisation: 4.1.3, 4.1.5 e,i 4.2 Quality system: 4.2.1, 4.2.2 a to d, 4.2.3 4.3 Document control 4.4 Review of requests, tender & contracts 4.7 Service to the client 4.8 Complaints 4.9 Control of non conforming testing and/or calibration work 4.10 Corrective action 4.11 Preventive action 4.12 Control of records 4.13 Internal audits 4.14 Management reviews 5.4.7 Control of data 5.4.7.1., 5.4.7.2a, c 5.8 Handling of test and calibration items 5.9 Assuring the quality of test and calibration results
	Professional integrity	4.1 Organisation: 4.1.4, 4.1.5 b, d
IV.3	Impartiality	4.1 Organisation: 4.1.4, 4.1.5 d,e
IV.4	Professional secrecy	4.1 Organisation: 4.1.5 c, e 4.12 Control of records: 4.12.1.3 5.4.7 Control of data: 5.4.7.2b

Notes:

1. EN ISO/IEC 17025 covers both testing and calibration laboratories. For the purposes of this guidance paper only provisions relating to test bodies are relevant. Clauses referring to "testing/calibration laboratories" should be read as "testing laboratories".

2. Certain clauses in EN ISO/IEC 17025 refer to sampling capability. Information on sampling and the treatment of results is given in the relevant technical specification. Where this information is not given or is incomplete in the technical specification, proposals will be made by the relevant Sector Group of Notified Bodies.

3. Clause 5.4 "Test and calibration methods and method validation", subclauses 5.4.1 to 5, cover the capability of test laboratories to develop their own tests. These clauses are not included in the table above because, under the CPD, test methods are set out in the technical specifications. If further elaboration of test methods is needed, this is the task of the relevant CEN Technical Committee or EOTA Working Group, possibly advised by the relevant Sector Group of Notified Bodies.

   However, some aspects are relevant to laboratories carrying out CPD Article 4.4 procedures. For example:

   5.4.5.2 The laboratory shall validate standard methods used outside their intended scope, and amplifications and modifications of standard methods to confirm that the methods are fit for the intended use. The validation shall be as extensive as is necessary to meet the needs of the given application or field of application. The laboratory shall record the results obtained, the procedure used for the validation, and a statement as to whether the method is fit for the intended use.

4. Clause 5.4.6 covers estimation of uncertainty of measurement including use of statistical methods. Clause 5.10 covers the content and format of test reports. These clauses are not included in the table above because,

under the CPD, these matters should be dealt with in the technical specifications and/or by the relevant Sector Groups of Notified Bodies.

D2. The above clauses provide the basis for assessment against the Annex IV criteria. However, in order to comply fully with the requirements of Article 18 and also to promote mutual confidence in the assessment process the following requirements should also apply:

- **Scope of designation :**

  Scope shall be defined by reference to relevant products and one or more tests or types of tests recognised for the purpose of the CPD.

  When the harmonised test methods are not available (pre-notification) then the characteristics as identified in the relevant mandate can be used to identify the tasks of the notified testing laboratory.

- **Method of assessment :**

  Assessment must be made against the Annex IV criteria.

  This may be achieved through a formal accreditation scheme, by a recognised accreditation body, based on EN ISO/IEC 17025 plus the specific requirements of the CPD and the harmonised technical specification for the product concerned.

ANNEX E: INTERPRETATION OF ANNEX IV REQUIREMENTS FOR THIRD PARTIES PERFORMING CALCULATION IN SUPPORT OF AoC.

E1. The requirements set out in Annex IV of the Directive are considered to correspond to the relevant clauses in EN ISO/IEC 17025:2005 "General requirements for the competence of testing and calibration laboratories" which replaced the previous version. The application of this standard should take account of the size and complexity of the organisation being assessed and its technical scope and should not lead to the imposition of unnecessary bureaucracy.

E2. It is being recognised, in accordance with CPD, Annex III (3), that calculation may replace testing in the framework of initial type calculation. The requirements set out below are considered to apply to third parties, i.e. third parties performing "Initial type calculation", but also including certification and inspection bodies. For certification and inspection bodies, the specific requirements related to calculation should be considered in addition to those specified in Annexes A, B or C of this Guidance paper.

Relevant clauses of EN ISO/IEC 17025:2005

Annex IV Criteria		Relevant clauses of EN ISO/IEC 17025:2005
IV.1 Availability of:	Personnel	4.1 Organisation: 4.1.5 a, f, g, k 5.2 Personnel[7] Management shall authorize personnel to use computers in the information system. Policies shall be established which define who may use the computer system, who may access data and who is authorized to enter and change results or modify computer programmes

[7] **Further requirements for personnel carrying out the design (calculation)**

Annex IV Criteria - IV.2 Technical competence: Personnel

Option 1

a. The Notified Body defines minimum competence criteria for evaluation personnel regarding education, training and experience, referring to:

i Essential requirements of security established in the relevant Directive

ii harmonised technical specifications and design codes of application for products.

iii evaluation of conformity procedures established in the Directive corresponding to the evaluation to carry out

iv knowledge of the products (technology, methods of production, use of products and defects that may occur in its use and putting into service, understanding that the meaning of the deviations found in relation to the safety in use in such products).

b. The above mentioned criteria should cover the fitness to evaluate the product and to make professional statements of their conformity with the essential requirements of the directive. The criteria are fully documented and in line with any other harmonised criterion developed by the Group of NBs designated for the application of the relevant directive. The NB applies the recommendations of the Group of NBs unless reasons to deviate from such recommendations in the particular case are justified.

c. The NB duly qualified personnel available and with the necessary competence regarding the requirements established to carry out the activities of the revision of the design.

Option 2

The Notifying Authority needs to ensure that personnel of the body performing calculation (or its subcontractor) who undertake the evaluation are entitled to perform such calculations according to the specific requirements of the Member State by which the body has been designated.

	Means	4.1 Organisation: 4.1.5 h 4.5 Subcontracting of tests and calibrations 4.6 Purchasing services and supplies 5.3 Accommodation and environmental conditions Particular emphasise shall be laid to environmental conditions related to computer hardware.
	Equipment	5.5 Equipment Where required, notified bodies shall have at their disposal, hard- and software to perform the calculations in accordance with the relevant technical specification. To assume responsibility, the notified body shall judge whether manufacturer's calculations suffice or need to be performed with the notified body's equipment. When computers are used for the collection, processing, recording, reporting, storage or retrieval of data, the notified body performing calculation shall ensure that: a) computer software is documented and suitably validated as adequate for use, b) procedures are established and implemented for protecting the integrity of data at all times (e.g. no connection to internet), c) computers are maintained to ensure proper functioning and provided with environmental and operating conditions necessary for maintaining the integrity of data, and d) computer programmes and routines are adequately protected to prevent access, alteration or destruction by casual or unauthorized persons. 5.6 Measurement traceability: 5.6.1 General
IV.2 Technical competence		4.1 Organisation: 4.1.3, 4.1.5 e, i 4.2 Quality system: 4.2.1, 4.2.2 a to d, 4.2.5 4.3 Document control 4.4 Review of requests, tender & contracts 4.7 Service to the client 4.8 Complaints 4.9 Control of non conforming testing and/or calibration work 4.11 Corrective action 4.12 Preventive action 4.13 Control of records 4.14 Internal audits 4.15 Management reviews 5.4.7 Control of data 5.4.7.1., 5.4.7.2a, c 5.8 Handling of test and calibration items 5.9 Assuring the quality of test and calibration results
Professional integrity		4.1 Organisation: 4.1.4, 4.1.5 b, d

IV.3 Impartiality	4.1 Organisation: 4.1.4, 4.1.5 d, e
IV.4 Professional secrecy	4.1 Organisation: 4.1.5 c, e 4.13 Control of records: 4.13.1.3 5.4.7 Control of data: 5.4.7.2b

Notes:

1. EN ISO/IEC 17025:2005 covers both testing and calibration laboratories. For the purposes of this guidance paper only provisions relating to third parties performing attestation activities for those cases where calculation replaces testing to determine performances test bodies are relevant. Clauses referring to "testing/calibration laboratories" should be read as "third parties performing attestation activities for those cases where calculation replaces testing to determine performances".

2. Certain clauses in EN ISO/IEC 17025:2005 refer to sampling capability. Information on sampling and the treatment of results is given in the relevant technical specification. Where this information is not given or is incomplete in the technical specification, proposals will be made by the relevant Sector Group of Notified Bodies.

3. Clause 5.4 "Test and calibration methods and method validation", subclauses 5.4.1 to 5, cover the capability of test laboratories to develop their own tests. These clauses are not included in the table above because, under the CPD, calculation methods are set out in the technical specifications. If further elaboration of calculation test methods is needed, this is the task of the relevant CEN Technical Committee or EOTA Working Group, possibly advised by the relevant Sector Group of Notified Bodies.

   However, some aspects are relevant to laboratories carrying out CPD Article 4.4 procedures.

   For example: *5.4.5.2 The laboratory shall validate non-standard methods, laboratory-designed/developed methods, standard methods used outside their intended scope, and amplifications and modifications of standard methods to confirm that the methods are fit for the intended use. The validation shall be as extensive as is necessary to meet the needs of the given application or field of application. The laboratory shall record the results obtained, the procedure used for the validation, and a statement as to whether the method is fit for the intended use.*

4. Clause 5.4.6 covers estimation of uncertainty of measurement including use of statistical methods. Clause 5.10 covers the content and format of test reports. These clauses are not included in the table above because, under the CPD, these matters should be dealt with in the technical specifications and/or by the relevant Sector Groups of Notified Bodies

5. Clause 4.10 covers improvement. This clause is not included in the table above because, under the CPD, continuous improvement, although important, is not a requirement.

E3. The above clauses provide the basis for assessment against the Annex IV criteria. However, in order to comply fully with the requirements of Article 18 and also to promote mutual confidence in the assessment process the following requirements should also apply:

- **Scope of designation (Attestation of conformity system 3 notified bodies only):**

  Scope shall be defined by reference to relevant products and one or more calculations or types of calculations recognised for the purpose of the CPD. When the harmonised calculation methods are not available then the characteristics as identified in the relevant mandate can be used to identify the tasks of the notified third party performing attestation activities where calculation replaces testing to determine performances.

- **Method of assessment :**

  Assessment must be made against the Annex IV criteria.

This may be achieved through a formal accreditation scheme, by a recognised accreditation body, based on EN ISO/IEC 17025:2005 plus the specific requirements of the CPD and the harmonised technical specification for the product concerned.

ANNEX F: GUIDANCE FOR MEMBER STATES ON LETTERS OF DESIGNATION OF NOTIFIED BODIES

E1 Member States are each responsible for designating testing laboratories, product certification bodies, factory production certification bodies and inspection bodies (Art. 18.1).

E2 The precise format of designation may vary, depending on the legal requirements and specific arrangements in each Member State. However, in the interest of creating the maximum of mutual confidence in the organisations concerned, formal letters of designation should at least be consistent in the points that they deal with.

E3 All letters of designation should, as a minimum, cover the following points (which are also of relevance for the letter of Notification towards the Commission and the other Member States) :

1. The legal basis for designation.

2. Identification of the applicant

3. Identification number issued by the Commission services.

4. Period for which designation is valid.

5. Further details when relevant

6. Requirement either of continued compliance with EN 45000 as necessary for CPD purposes, or otherwise state how compliance with the Annex IV criteria is to be demonstrated.

7. Full contact details of contact person nominated in the body responsible for designation under the CPD.

   This person will be granted access to the Group of Notified Bodies CIRCA. There is a requirement to promptly inform the notifying authority and the administrative secretariat of the GNB of each change in contact details. For large organisations, with a broad notification, more persons can be nominated.

8. Title and number of the relevant Attestation of Conformity Decision

9. Description of the product(s)/intended use(s) that are subject of the notification.

   Member States are requested to stick exactly to the wordings used in the relevant AoC decision. This is to increase transparency, smooth administrative procedures and allow building an effective Notifications database.

10. Definition of the tasks for which the body is notified according to the CPD. There are only 4 possibilities:

    product certification
    certification of factory production control system
    inspection of factory production control system.

testing

11. Reference to harmonised European technical specifications (Number, date and version).

For certification and inspection bodies it will in most cases be sufficient to refer to the harmonised product standard or the relevant ETA Guideline. For test laboratories it will be necessary to refer to individual European test standards or parts thereof or test methods referred to by ETAs in all cases where the notification is not covering the complete set of tests required by the harmonised technical specifications.

Examples:

EN xxxx:2001
ETAG 001:1997

12. Additional information

Note: Member States can choose to write the letter of notification in any of the official languages of the community. However, for easy communication, we recommend that the information is also available in English.

E4 Notification also gives the presumption that the following provisions are enforced by the Member State (often delegated to the designating authority or the accreditation body):

- Requirement for information on important changes in personnel or equipment to be communicated to the designating authority/accreditation body.

- Requirement of annual evidence of civil liability insurance cover.

- Obligation to take part in proficiency testing, if required.

- Requirement for the notified body to be active in the Group of Notified Bodies.

- Requirement that full records shall be kept for at least 10 years from the last date of manufacture of the product, particularly of applications for tests; certification or inspections and of the results.

- Provision for the designating authority to have access to these records.

- Conditions under which designation may be withdrawn, including failure to comply with the Annex IV criteria.

- In the case of withdrawal of designation, requirement for the records to be transferred to the designating authority, or continued access to be assured.

- Provision for the designating authority to be given access to carry out any inspections it may consider necessary in order to ensure compliance with the terms of designation.

ANNEX G: NOTIFICATION OF A BODY PURSUANT TO ARTICLE 18 OF THE CONSTRUCTION PRODUCTS DIRECTIVE 89/106/EEC

The numbers in ( ) refer to the clauses of annex E (E3)

Date:

From: **To:** (other Member States, Secretariat General of the Commission)

1. Reference:	Directive No. **89/106/EEC** (1)

2.A. Name of body, acronym, address, telephone, fax, email

(2)

2.B. Identification number of the body (3)

3. Period of validity:

Period of validity (4)

☐ Unlimited

☐ Valid until .....

…….. (5)

4. Technical qualification of the body (accreditation or other official authorization):

(6)

5. Authorised contact person(s) in notified Body.
Name, address if different from above, direct telephone, local fax, personal Email.

(7)

6. Tasks performed by the body:

AoC	Product(s)/intended use	tasks	Specifications
(8)	(9)	(10)	(11)

7. Additional information

(12)

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

Brussels,
September 2002
ENTR/G5 Fy

GUIDANCE PAPER B

(concerning the Construction Products Directive 89/106/EC)

THE DEFINITION OF FACTORY PRODUCTION CONTROL IN TECHNICAL SPECIFICATIONS FOR CONSTRUCTION PRODUCTS

(Revision Sep 2002)

(originally issued following consultation of the Standing Committee on Construction at the 29th meeting on 29 May 1995, as document CONSTRUCT 95/135 Rev.1.
Updated following consultation of SCC Sep 02)

Preface

Article 20 of the Construction Products Directive (89/106/EC) 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.

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THE DEFINITION OF FACTORY PRODUCTION CONTROL IN TECHNICAL SPECIFICATIONS FOR CONSTRUCTION PRODUCTS

Introduction

Article 13 3(a) of Council Directive 89/106/EC of 21 December 1988 on the Approximation of Laws, Regulations and Administrative Provisions of the Member States relating to Construction Products (referred to below as "the Directive") lays down that manufacturers may only affix the EC conformity marking on their construction products if they have "a factory production control system to ensure that production conforms with the relevant technical specifications".

This Guidance Paper (GP) centres on the factory production control system considered as a means of ensuring that products placed on the market conform with the technical specifications. Technical specifications are those set out in Article 4.1 of the Directive.

It is mainly intended for those drafting harmonised technical specifications (harmonised standards and ETAs [European Technical Approvals]) and those drafting ETA guidelines. It applies whatever system of attestation of conformity is adopted. It may also be relevant, however, to manufacturers making declarations and enforcement authorities.

The writers of technical specifications and guidelines for European technical approvals should also take into account that the manufacturer's compliance with the EN ISO 9000 series of standards is not a mandatory requirement in the framework of the Construction Products Directive and should not be included as such in harmonised technical specifications or guidelines for ETAs[1] .

1. Objective and scope

This GP is intended to provide a common basis for understanding factory production control systems required by the Directive in support of its legal requirements.

The GP is not itself directly applicable. But its provisions could apply following their introduction in harmonised technical specifications.

2. Background

Factory production control

The purpose of factory production control is defined in the Directive. Attestation of conformity cannot be achieved in the absence of such a control.

"Factory production control" is defined by Annex III of the Directive as "the permanent internal control of production exercised by the manufacturer. All the

---

[1] Manufacturers having an FPC system which complies with EN ISO 9001/2 and which addresses the requirements of the appropriate harmonised standard are recognised as satisfying the FPC requirements of the Directive.

elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures. This production control system documentation shall ensure a common understanding of quality assurance and enable the achievement of the required product characteristics and the effective operation of the production control system to be checked".

Factory production control therefore brings together operational techniques and all measures allowing maintenance and control of the conformity of the product with technical specifications. Its implementation may be achieved by controls and tests on measuring equipment, raw materials and constituents, processes, machines and manufacturing equipment and finished products, including material properties in products, and by making use of the results thus obtained.

3. Requirements for factory production control

3.1 General comments

3.1.1. The manufacturer is responsible for organising the effective implementation of the factory production control system. Tasks and responsibilities in the production control organisation should be documented and this documentation should be kept up-to-date. In each factory the manufacturer may delegate the action to a person having the necessary authority to:

(a) identify procedures to demonstrate conformity of the product at appropriate stages;

(b) identify and record any instance of non-conformity;

(c) identify procedures to correct instances of non conformity.

3.1.2. The manufacturer should draw up and keep up-to-date documents defining the factory production control which he applies. The manufacturer's documentation and procedures should be appropriate to the product and manufacturing process. All FPC systems should achieve an appropriate level of confidence in the conformity of the product. This involves :

(a) the preparation of documented procedures and instructions relating to factory production control operations, in accordance with the requirements of the reference technical specification (see paragraph 3.1.3);

(b) the effective implementation of these procedures and instructions;

(c) the recording of these operations and their results;

(d) the use of these results to correct any deviations, repair the effects of such deviations, treat any resulting instances of non-conformity and, if necessary, revise the FPC to rectify the cause of non-conformity.

3.1.3. Production control operations include some or all of the following operations:

(a) the specification and verification of raw materials and constituents;

(b) the controls and tests to be carried out during manufacture according to a frequency laid down;

(c) the verifications and tests to be carried out on finished products according to a frequency which may be laid down in the technical specifications and adapted to the product and its conditions of manufacture.

N.B.- Depending on the specific case, it may be necessary to carry out i) the operations referred to under (b) and (c), ii) only the operations under (b) or iii) only those under (c).

- The operations under (b) centre as much on the intermediate states of the product as on manufacturing machines and their adjustment, and equipment etc. These controls and tests and their frequency are chosen based on product type and composition, the manufacturing process and its complexity, the sensitivity of product features to variations in manufacturing parameters etc.
- With regard to operations under (c), where there is no control of finished products at the time that they are placed on the market, the manufacturer must ensure that packaging, and reasonable conditions of handling and storage, do not damage products and that the product remains in conformity with the technical specification.
- The appropriate calibrations must be carried out on defined measuring and test instruments.

3.2 Verifications and tests

3.2.1. General comments

The manufacturer must have or have available the installations, equipment and personnel which enable him to carry out the necessary verifications and tests. He may, as may his agent, meet this requirement by concluding a sub-contracting agreement with one or more organisations or persons having the necessary skills and equipment.

The manufacturer must calibrate or verify and maintain the control, measuring or test equipment in good operating condition, whether or not it belongs to him, with a view to demonstrating conformity of the product with its technical specification. The equipment must be used in conformity with the specification or the test reference system to which the specification refers.

3.2.2. Monitoring of conformity

If necessary, monitoring is carried out of the conformity of intermediate states of the product and at the main stages of its production.

This monitoring of conformity focuses where necessary on the product throughout the process of manufacture, so that only products having passed the scheduled intermediate controls and tests are dispatched.

3.2.3. Tests

Tests should be in accordance with the test plan and be carried out in accordance with the methods indicated in the technical specification.

These methods should generally be direct methods.

It is however possible, in the case of certain characteristics, that the prescribed specification gives the possibility of using indirect test methods if a definite correlation or relationship can be established and if possible verified between specified characteristic X - the characteristic to be verified - and another characteristic Y which is easier or safer to measure than characteristic X. Indirect test methods may be retained when available and appropriate.

Depending on the system of attestation of conformity adopted for the product or the product family, initial type tests on the product may be carried out by the manufacturer himself or must be carried out or validated by an notified body.

In the latter case, this obligation only applies to tests to determine characteristics for which the choice of attestation of conformity system requires the intervention of an notified body or laboratory. These characteristics are given in Annex 3 of the mandates.

The same is true for audit tests on samples taken from the factory, market or site when the system of attestation of conformity adopted is the certification of the product and includes the carrying out or validation of these tests by the notified body concerned.

Test Records

The manufacturer should establish and maintain records which provide evidence that the product has been tested. These records should show clearly whether the product has satisfied the defined acceptance criteria. Where the product fails to satisfy the acceptance measures, the provisions for non-conforming products should apply.

3.2.4. Treatment of products which do not conform.

If control or test results show that the product does not meet the requirements, for example if the statistical variation of test results exceeds the limits allowed by the technical specification, the necessary corrective action must immediately be taken. Products or batches not conforming must be isolated and properly identified. Once the fault has been corrected, the test or verification in question must be repeated.

If products have been delivered before the results are available, a procedure and record should be maintained for notifying customers.

3.2.5. Recording of verifications and tests (manufacturer's register).

The results of factory production controls must be properly recorded in the manufacturer's register. The product description, date of manufacture, test method adopted, test results and acceptance criteria must be entered in the register under the signature of the person responsible for control who carried out the verification.

With regard to any control result not meeting the requirements of the technical specification, the corrective measures taken to rectify the situation (e.g. a further

test carried out, modification of manufacturing process, throwing away or putting right of product) must be indicated in the register.

3.3. Traceability

It is the manufacturer's, or his agent's, responsibility to keep full records of individual products or product batches, including their related manufacturing details and characteristics, and to keep records of to whom these products or batches were **first** sold. Individual products or batches of products and the related manufacturing details must be completely identifiable and retraceable. In certain cases, for example for bulk products, a rigorous traceability is not possible. The expression of the requirement in the relevant technical specifications should be realistically adapted keeping in view a traceability as complete as possible.

4. Contents of the technical specifications on products

Technical specifications specify in the appropriate chapter(s) the elements and requirements either mandatory or informative referred to in Chapter 3 above.

Everything comprising the necessary provisions of factory production control and the attestation of conformity adopted for the product to which the specification relates has a mandatory character.

Where possible, the elements mentioned and the requirements set out must be adapted or adaptable:

- to the particular features of the manufacturing processes. In particular, production control must be able to be adapted depending on the degree of automation of the manufacturing chain, adjustment devices, self adjustment, which manufacture may comprise.
- to the performance level the product is intended to have where the technical specification of the product provides for a range of performance levels and where the risk resulting from not achieving the intended performance varies with the level.

The adaptation procedures must be chosen in the interests of ensuring that the level of confidence obtained by the production control is effectively the same for all conceivable situations of manufacture.

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

Brussels,
September 2002
ENTR/G5 GK

GUIDANCE PAPER C

(concerning the Construction Products Directive 89/106/EC)

THE TREATMENT OF KITS AND SYSTEMS UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

(Revision Sep 2002)

(originally issued following consultation of the Standing Committee on Construction at the 37th meeting on 3 February 1997, as document CONSTRUCT 96/175 Rev.2.
Updated following consultation of SCC Sep 02)

Preface

Article 20 of the Construction Products Directive (89/106/EC) 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".

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THE TREATMENT OF KITS AND SYSTEMS UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

1. Scope

1.1 This Guidance Paper is intended to clarify the scope of harmonised technical specifications under the Construction Products Directive (CPD). It is also intended to clarify the difference between the concepts of a "kit" and a "system", terms which are used in this paper.

1.2 This Guidance Paper is aimed at those involved in the preparation of harmonisation mandates and in the writing of technical specifications.

2. Definitions

2.1 **"Design system" :** a collection of components from which a "kit" may be created for subsequent installation in the works. A "design system" may, for example, be presented in a supplier's catalogue, from which the purchaser/specifier may make a choice.

A "design system" may give rise to one or many different "kits" (i.e. construction products, defined below). A "design system" cannot be a construction product, because it is possible only to buy one "kit" at a time from the "system"; the "system" itself cannot be bought.

2.2 **"Assembled system" :** a "kit" after it has been installed in the works. An "assembled system" may be made up only of the "kit" or it may comprise the "kit" assembled with one or more other products which may or may not themselves be construction products. In the wording of the CPD, "assembled system" is the equivalent of "works or part of the works".

An "assembled system" is not considered to be a construction product in the sense of the CPD because it is the result of the combination of components incorporated in the works and therefore exists only in the works and not on the market.

2.3 **"Kit":** in the wording of the CPD, a "kit" is the equivalent of a "construction product". A construction product is a "kit" when it is a set of at least two separate components that need to be put together to be installed permanently in the works (i.e. to become an "assembled system"). For a "kit" to come within the scope of the CPD, the following conditions must be satisfied :

i) the "kit" must be placed on the market, allowing a purchaser to buy it in one transaction from a single supplier,

ii) the "kit" must have characteristics that allow the works in which it is incorporated to satisfy the Essential Requirements, when the works are subject to regulations containing such requirements.

There are two possible types of "kit": those in which the number and type of components are pre-defined and remain constant, and those in which the number,

the type and the arrangement of components change according to a specific application.

2.4 **"Component":** a product which, when combined with one or more other products, makes up a "kit". A component may be a construction product in the sense of the CPD but this is not necessary for it to be considered as part of a "kit".

2.5 Figure 1 shows a schematic representation of the above definitions.

3. General provisions for "kits"

3.1 It is up to specification writers, guided by mandates, to decide whether or not components are currently, or are likely to be, placed on the market as a kit, and hence that a specification is required.

3.2 The CE marking, applied to a "kit", does not cover, or in any way guarantee, installation. It states only that the "kit" has the capability to allow the works in which it is incorporated to satisfy the Essential Requirements provided that it is correctly assembled and installed.

3.3 The manufacturer* or his agent responsible for placing a "kit" on the market may state, on the components, on the "kit" itself, or in documentation accompanying the "kit", the criteria for assembly/installation that, when followed, ensure the declared performance of the "kit". This shall be done in all cases where the correct functioning of the "assembled system" depends on correct assembly/installation of the "kit".

3.4 Some "kits" may be made up of one of many different possible combinations of components from a "design system" (a fire alarm "kit", for example, will be made up of different types and number of detectors and alarms, and different control equipment, depending on the building in which it will be installed). The CE marking in this case shall be taken to mean that the components of the "kit" have been correctly designed and selected so that the performance of the resulting "assembled system" is ensured. Technical specifications shall include provisions to allow for this.

3.5 A "kit", prior to CE marking, should be assessed in its intended use conditions. In some cases the manufacturer would need to construct a representative "assembled system" which would then be type tested. Technical specifications shall indicate the allowed variations of design and installation parameters which would still allow the "kit" to comply with the results of the type testing.

3.6 Where a "kit" may be made up of many different sets of components (see 3.4 above), it may be impractical to assess every different combination. In such cases, technical specifications shall contain provisions (for example relating to design and/or compatibility of components) so that the performance of each "kit" may be determined.

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* The person responsible for placing the "kit" on the market may not be the manufacturer of its components. In this case, "manufacturer or his agent" means the person responsible for ensuring the conformity of the "kit" with the relevant technical specification.

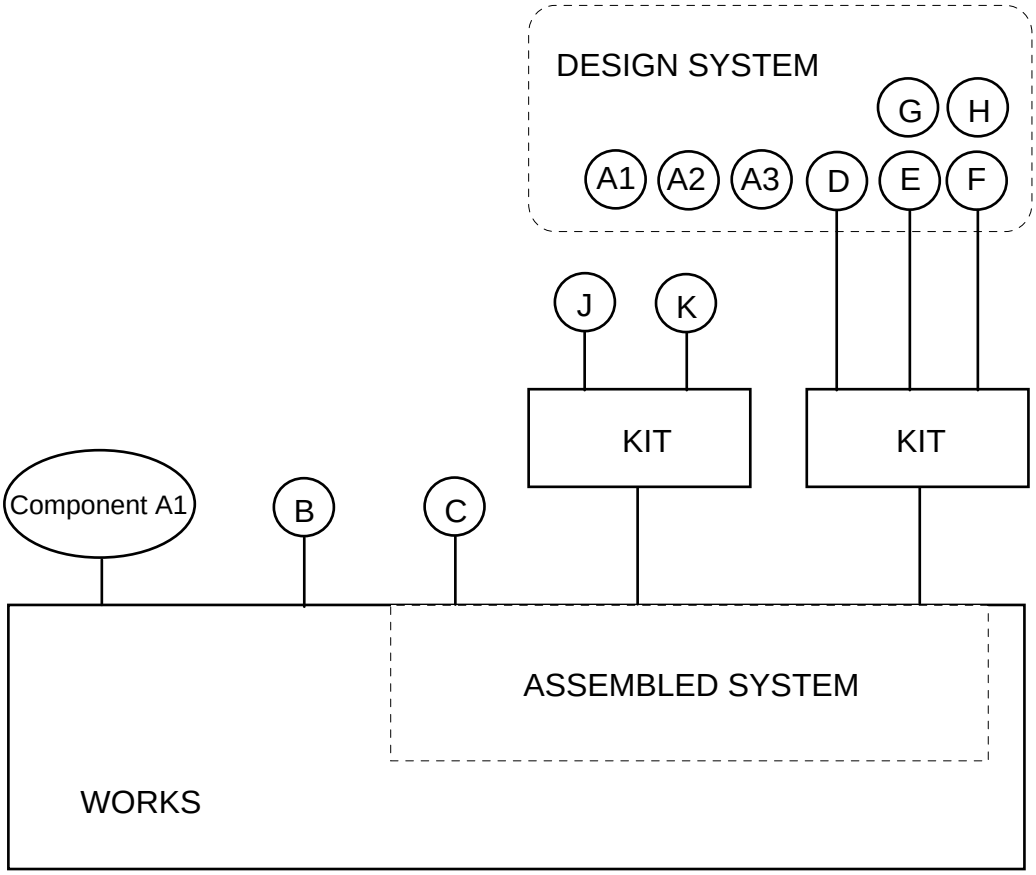
3.7 While technical specifications may contain requirements on the compatibility of components in a "kit", they must not limit the placing on the market of "kits", based on alternative systems of compatibility, by giving prescriptive compatibility requirements.

3.8 Harmonised specifications shall cover kits in which the number and type of components are pre-defined and remain constant (an example being two-part epoxy resin, sold as a tube of adhesive and a second tube of hardener). They shall also cover an entire "design system", i.e. "kits" where the number, the type and the arrangement of components change according to a specific application (see the example of the fire alarm "kit" given above).

3.9 Some "kits" include optional components. These may be, for example, adaptors or fittings that may or may not need to be used, depending on the particular installation of the "assembled system". Such optional components form part of the "kit". If their use changes the performance of the "assembled system", this change in performance should be assessed and stated with the CE marking. Matters such as this need to be covered in the technical specifications.

3.10 Individual components of a "kit", if they can be bought separately (either at the time of first purchase or later as replacement parts), may also be construction products (in the sense of the CPD) if they have characteristics contributing to the satisfaction, by the works, of regulations. The required characteristics of a component, however, are unlikely to be the same as those for the "kit". A component that is CE marked as a construction product in its own right may need to be assessed again as part of a "kit".

Figure 1 : Schematic representation of concepts "systems", "kits", and "components".



Notes :

1. A component may, or may not, be a construction product in its own right, in the sense of the CPD.
2. A design system can give rise to one or more kits, each of which may have different combinations of components.

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

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GUIDANCE PAPER D

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

CE MARKING UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

Preface

Article 20 of the Construction Products Directive (89/106/EC) 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.

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GUIDANCE PAPER D

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

CE MARKING UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

- This Guidance Paper was originally issued by the Commission Services, following consultation of the Standing Committee on Construction at the 45th meeting on 10 December 1998, as document CONSTRUCT 97/220 Rev.5.

- It was updated following consultation of the Standing Committee on Construction on September 2002 (editorial changes only)

- It was updated the 5 January 2004 following consultation of Standing Committee at the 58th meeting (11 November 2003), as document CONSTRUCT 03/618 Rev.1, then changed (clause 3.4) the 17 February 2004.

- It was updated the 27 May 2004 following written consultation of Standing Committee the 2nd April 2004, as document CONSTRUCT 04/649 Rev.1

CE MARKING UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

1. Scope

1.1. This Guidance Paper is intended to clarify the conditions covering the fixing of the CE marking itself, the additional information that should accompany the marking, and the content of the EC declaration and certificate of conformity.

1.2. The Guidance Paper concerns products within the scope of Council Directive 89/106/EC[1] (hereafter referred to as the Construction Products Directive or CPD) and which bear the CE marking according to the provisions of this Directive. They take account of Council Directive 93/68/EC[2] (the "CE marking Directive") amending the CPD in respect of CE marking, and of Council Decision 93/465/EC[3] on the rules for the affixing and use of the CE conformity marking.

1.3. The Guidance Paper is intended for a number of different audiences, particularly 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 may also be of interest to manufacturers and users for information purposes, although the technical specifications, once available, will contain all the relevant details for a given product.

2. General principles of CE marking

2.1. This Guidance Paper falls within the framework of the general policy of the Commission with respect to CE marking, as well as within the scope of the CPD (see also the Guide to the implementation of directives based on the new approach and the global approach – chapter 7[4]). In order to reinforce the coherence and transparency of the CE marking regime, this section considers the common rules on the use of CE marking, as well as those specific to the CPD. *Where the latter uses specific terminology, this is highlighted in the text using italics.*

2.2. The CE marking symbolises that the product in question complies with all applicable provisions (or requirements) of the applicable directive(s) that provide for CE marking (essential requirements, technical specifications and specific dispositions), and that the product has been subject to the appropriate conformity assessment procedure(s) contained in the directive(s)[5]. *In the case of the CPD, the CE marking indicates that the product complies with the relevant national standards transposing the harmonised standards, or a European technical approval, or one of the national technical specifications referred to in Article 4*

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1 OJ No L 40, 11.2.1989

2 OJ No L 220, 30.8.1993

3 OJ No L 220, 30.8.1993

4 ISBN 92-828-7500-8. http://europa.eu.int/comm/enterprise/newapproach/newapproach.htm

5 See the Guide to the implementation of directives based on the New Approach and the Global Approach – chapter 2.2 which explains the simultaneous application of Directives

*(2.c), **and** that the system of attestation of conformity laid down in the Commission Decision relating to the product has been applied.*

Basically, as the technical specifications should be performance-based, the CE marking in the case of the Construction Products Directive symbolises that the construction products have been assessed (initial type testing) for characteristics which have an influence on the satisfaction for the essential requirements for the works and which are regulated in at least one Member State (mandated characteristics) using the relevant evaluation method identified in the technical specifications. The performances of the product are declared in the information accompanying the CE marking. The CE marking also symbolises that the specific harmonised performance criteria (e.g. threshold values) are fulfilled and all the tasks linked to attestation of conformity have been completed.

In the context of harmonised European standards the CE marking means compliance with the "harmonised" part, and not with the remaining "voluntary" part of the body of the standard. The informative "Annex ZA" of the standard details the conditions necessary for the manufacturer to affix CE marking on the products.

2.3. The scope of the CE marking regime is laid down in the relevant harmonisation directive(s), and can only be applied by the legal entity responsible for the conformity of the product. *In the case of the CPD, the CE marking is only permitted for products covered by one of the technical specifications referred to in Articles 4 (2) and 4 (4). It is the manufacturer, or his authorised representative established in the EEA, that takes responsibility for affixing the CE marking.*

2.4. Where products are subject to other directives concerning other aspects and which also provide for CE marking, the latter shall indicate that the products also conform to the provisions of those other directives[6]. Where one or more of these directives allow the producer, during a transitional period, to choose which arrangements to apply, the information accompanying the CE marking must clearly record the directives that have been applied[7].

2.5. CE marking is the **only** marking which indicates that a product conforms to a directive based on the principles of the "new approach" (see also paragraph 2.2), it **must** replace any mandatory conformity markings having the same scope as the CE marking, which possibly existed in the national laws, regulations and administrative provisions of Member States before harmonisation occurred. The CE marking is neither a mark of origin, indicating "made in the EEA", nor a quality mark.

2.6. Once all obligations arising from EC law (directives, Treaty provisions etc.) have been respected, a producer may also affix different marks to a product, such as a voluntary quality mark or a voluntary standardisation mark, on condition that the visibility and legibility of the CE marking are not reduced, and provided that such

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[6] See CPD article 2.2

[7] See the Guide to the implementation of directives based on the New Approach and the Global Approach – chapter 7.2 which provides detail on the CE marking where products are subject to several Directives

marks are not likely to deceive third parties as to the meaning and form of the CE marking. A producer remains entitled, on a voluntary basis, to go beyond the strictly legal requirements, for commercial or marketing reasons, allowing a product to be positioned on the market in the normal way.

2.7. Any statements accompanying a product but relating to non-harmonised aspects must be kept distinct from the information accompanying the CE marking. Non-harmonised aspects must not, under any circumstances, be presented in such a way that they may be confused with harmonised ones, nor in such a way that the CE marking, either deliberately or by mistake, may be considered to apply to them.

Therefore, a producer has the right to provide additional information (e.g. the date, batch, line of manufacture, or an identification number) for CE marked products. However, this additional information, including possible voluntary marks, should be given in a separate place (e.g a separate box), in order to avoid any confusion[8] with the information linked to the CE marking, (see example 5 in the annex 1)

2.8. The CE marking must be affixed visibly, legibly and indelibly, with the form as described in Council Directive 93/68/EC and Council Decision 93/465/EC, and must be easily accessible for the market surveillance authorities. *In the case of the CPD, the CE marking must be affixed on the product itself, on a label attached to it, on its packaging, or on the accompanying commercial documents (see also paragraph 3.2).*

2.9. The CE marking must be affixed before the product is placed on the market. The manufacturer, or his authorised representative established in the EEA, may decide when to affix the CE marking, depending upon the circumstances of the production process of the product in question. Then the manufacturer guaranties that the product is designed and manufactured, and its conformity assessed, in accordance with the provisions of the applicable New Approach directives when it will be placed on the market[9]

2.10. The CE marking must include the identification number of the notified body, where this body is involved in the production control stage, as defined by the relevant directive. *In the case of the CPD, this requirement applies to the attestation of conformity systems identified in Commission Decisions as "systems 1+, 1, and 2+"[10]. It is the certification body that is to be identified in each case.* Such identification numbers are assigned by the Commission as part of the body's notification procedure (see Guidance paper A).

2.11. The intended use of a construction product should be indicated in the information accompanying the CE marking, unless reference to the technical specification itself is sufficient[11]. In some cases, it can be necessary to add specific information

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[8] Guide to the implementation of directives based on the New Approach , paragraph 7.4

[9] Guide to the implementation of directives based on the New Approach , paragraph 3.1

[10] CPD Annex III.2(i) with audit testing of samples; CPD Annex III.2(i) without audit testing of samples; and CPD Annex III.2(ii) First possibility with continuous surveillance, assessment and approval of factory production control, respectively.

[11] In many cases, there is no need to declare the end use of the product, or to declare it in general terms only.

concerning the end use conditions (see 4.5 below). This information, if any, might be given in an appropriate form such as words, symbols, abbreviations, pictograms as well as category of uses. If necessary, the technical specification lay down the means for indicating the intended use(s) or end-use condition(s) of the product(s) concerned.

2.12. The producer is responsible for the conformity of the product at the time it is placed on the EEA market (i.e. the initial action of making a product available on the EEA market, with a view to its distribution and/or use within the EEA). He has no responsibility to ensure that the accompanying information passes further down the supply chain. However, the technical specifications should require the necessary information allowing everybody to check if the accompanying information correctly corresponds to the product concerned (e.g. by code, batch number, etc.). This is because traceability may be required e.g. from agents in the supply chain, or for market surveillance.

3. Information to accompany the CE marking

3.1. The CE conformity marking consists exclusively of the letters "CE" in the specified form, followed by the identification number of the notified body, where applicable (see paragraph 2.10). However, Annex III 4.1 of the CPD, as amended, requires that the CE marking be accompanied[12] by the following additional information:

- the name or identifying mark of the producer (see 3.3 below),
- the last two digits of the year in which the marking was affixed (see 3.4 below),
- where appropriate, the number of the EC certificate of conformity (see 3.5 below),
- where appropriate, indications to identify the characteristics and the declared performances of the product on the basis of the technical specifications (see 3.6 below).

3.2. The CE marking and the accompanying information shall be placed on the product itself, on a label attached to it, on its packaging, or on the accompanying commercial documents. The order in which this list is presented clearly reflects a hierarchy of preference. Wherever possible, the CE marking and accompanying information shall be placed on the product itself. If this is not practicable, for physical, technical or economic reasons, the CE marking and accompanying information may be placed in the next location specified, and so on until a suitable location is found.

For some products it may be appropriate to specify a combination of locations for the CE marking and the accompanying information, to reduce the information

[12] In the context of the CPD, the term "accompanying" means placed in one of the four locations specified in the directive (i.e. on the product itself, on a label attached to it, on its packaging, or on the accompanying commercial documents).

appearing on the product itself, whilst the complete information appears on the accompanying commercial documents. Where the information is split in this way, the location(s) lower in the hierarchy must always repeat that part of the information already placed higher up in the hierarchy.

Technical specifications shall indicate where the CE marking and the accompanying information shall be placed for the product(s) covered, following the above principles, and the location(s) shall be the same for all products of a given type.

3.3. **Name or identifying mark of the producer:** it is the name of the producer[13], not the authorised representative established in the EEA that shall accompany the CE marking. The purpose of this information is to identify the legal entity responsible for the manufacture of the product. Whilst several producers of components may be involved in contributing to the final product, only the legal entity responsible for the manufacture of the specific construction product is the producer under the CPD. In the case of retailers marketing the products of others under their own name, or "kit" sellers combining components from other producers, the underlying legal contract between the parties will establish their respective responsibilities.

The information provided here must be sufficient to allow the producer, as defined above, to be contacted directly. This means that the name must be completed by the producer's registered address.

The CPD does not require the producer to be established in the EEA, nor does it require that a producer from a non-EEA country has an authorised representative established in the EEA. The authorised representative is a legal entity expressly designated by the producer, legally entitled to act on his behalf within the EEA, and is not to be confused with the importer[14]. The latter is any legal entity who places a product from a third country on the EEA market, and is responsible in law for ensuring that all legal requirements on the product applicable for the EEA market have been fulfilled. In the case where a producer from a third country does not have an authorised representative established in the EEA and a problem arises, the market authorities would address themselves to the importer, according to their national legislation.

3.4. **Last two digits of the year when the marking was affixed:** refers to the physical act of affixing the CE marking[15] to each product (see clause 2.9). Where the nature of continuous manufacturing processes could create difficulties, technical specifications should provide guidance.

3.5. **Number of the EC certificate of conformity:** only where the system of attestation of conformity requires third party certification of the product or of the continuous surveillance of factory production control (those systems of attestation of

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[13] The terms "producer" and "manufacturer" mean the same thing in the CPD.

[14] Note that an importer, e.g. a professional importer, retailer or reseller, or even a final user who imports directly, can place products on the market without legally representing the producer in any way.

[15] At this moment, the manufacturer takes concretely the responsibility to declare and to guarantee that the product complies with the requirements included in the technical specifications relevant for the product.

conformity identified in the Commission Decisions as *"systems 1+, 1 and 2+"* [16]). The number will be a unique reference number allocated by the certification body consistent with the procedures agreed in discussions between notified bodies.

3.6. **Characteristics and declared performances of the products:** this information will be specific to the product(s) in question, according to their intended use(s) and end-use condition(s), and only general principles can be elaborated in this Guidance Paper.

a) Technical specifications (harmonised standards and European technical approvals) shall provide all the necessary information required for a producer to be able to complete the CE marking, including a clear identification of the tasks to be carried out by a notified body (if any).

b) The information accompanying the CE marking will include the following points according to the technical specification:

- b-1) A reference to the relevant harmonised technical specifications (harmonised standard(s) and/or European technical approval) applicable to the product.

- b-2) Where appropriate (see 2.11), an indication of the intended use(s) of the product, as defined in the technical specification, shall be provided as well, preferably in a suitable shorthand form, (e.g. "Type II.b-3"). Where the technical specification calls for harmonised performance characteristics, or durability aspects, to be evaluated and the result declared for a given intended use, including end-use condition, the information accompanying the CE marking shall indicate the corresponding performances.

- b-3) A producer is generally[17] authorised to use the ***"no performance determined"*** option in cases where he intends to place the product on the market of countries that do not have regulations requiring the declaration of one or more characteristics for a particular intended use or end-use condition[18].

Note: it is not possible to apply the NPD option for a mandated characteristic on one hand and to use on the other hand a voluntary attestation scheme to declare the performance of the product for this characteristic.

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[16] CPD Annex III.2(i) with audit testing of samples; CPD Annex III.2(i) without audit testing of samples; and CPD Annex III.2(ii) First possibility with continuous surveillance, assessment and approval of factory production control, respectively.

[17] Except where threshold levels have been established in the technical harmonised specifications for given characteristic(s) of the product (see Guidance Paper E "Levels and classes" clause 3.6) or if the required information is in relation with the identification of the product.

[18] In the Commission decisions on the applicable attestation of conformity system it is stated that: "the specification for the system should be such that it can be implemented even where performance does not need to be determined for a given characteristic because at least one MS has no legal requirement at all for such a characteristic..... In those cases the assessment of the performance must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect".

Therefore, the CE marking (see 3.2 above) should be accompanied by the following information:

- Reference to the technical specification,
- Where appropriate, indication of the intended use(s) of the product, including end-use condition when relevant.
- The declared performance, assessed for a given intended use or end-use condition, or NPD. When the NPD option is used by the producer, the acronym "NPD" (No Performance Determined) shall be explicitly indicated in connection with the characteristic concerned.
- In the case of ETAs[19], a simplified CE marking on the product itself will indicate the reference to the number of the ETA issued. Then, the information accompanying the CE marking will provide the declared value of the performance of the product or NPD option for each of the mandated characteristics.

The list of the mandated characteristics, for which the performance declaration is required, should be systematically reproduced in the information accompanying the CE marking as it is given in the technical specifications, without modification of the order of the characteristics, in order to increase transparency and facilitate the use of the product.

Note 1: Only information not explicitly identified by the reference to the technical specification itself needs to be provided with the CE marking.

Note 2: When technically justified, proxy characteristics (also called surrogate characteristics) may be used by CEN/EOTA instead of the mandated characteristics. This will normally have to be agreed by the Commission Services during the procedure of answering to the mandate. If new proxy characteristics are necessary, this requires an amendment of the mandate and/or the work programme issued by CEN/EOTA. However, to avoid delays, those proxy-characteristics may be used in technical specifications if Commission Services have been informed by CEN/EOTA in writing.

Further guidance to specification writers in respect of this additional information to accompany the CE marking is given in section 4. It should be stressed that whilst various options are open to specification writers, the technical specification must be precisely followed by the party affixing the CE marking.

The annex 1 presents illustrative examples of the CE marking applied to construction products.

3.7. **Record of EC Directives applied:** as indicated in paragraph 2.4, where one or more directives applicable to the product allow the producer, during a transitional period, to choose which arrangements to apply, the information accompanying the CE marking must clearly record the directives that have been applied, as published in the Official Journal of the European Union (CPD, article 2.2.b).

[19] According to the provision of the clause 3.2 second paragraph above

4. Guidance to specification writers regarding the identification of product characteristics

4.1. This section outlines the principles to be followed by specification writers with respect to the indications required to identify the harmonised characteristics of a product, where these are appropriate. Technical specifications must give precise details on how a producer has to apply the CE marking regime to a particular product. In this, the input of representatives of notified bodies could prove to be a useful source of knowledge and experience.

4.2. **Use of "codified" formats:** where additional information on the declared performances of harmonised characteristics is required, or to define the product, its intended use or its end-use condition, specification writers should explore the possibilities of using abbreviated forms of presentation (defined symbols, standard designations, classes of convenience or pictograms). Where this is done, it is important that specification writers ensure the consistent applications of such "codified" formats across product families.

4.3. **Intended uses:** possible intended uses for the product(s) should be defined in the technical specification, together with appropriate reference terms, or symbols, to be used in the information accompanying the CE marking, if necessary. Products with more than one intended use will need to be accompanied by sufficient information to cover all of them, but the technical specification should provide some flexibility in the presentation of this information, if appropriate (and if clauses 2.11 and 3.1 above are fulfilled)

For some products, it will not be possible or necessary to specify the intended use in anything other than general form, e.g. "for use in buildings". This is perfectly acceptable, provided that all the harmonised characteristics for all possible intended uses or end-use condition within this general category are covered.

End use conditions: This describes the real or a usual configuration of applying a product, in relation to all aspects that influence the behaviour of that product. It covers aspects such as its quantity, its orientation, its position in relation to other adjacent products, and its method of fixing. This concept diverges from the concept of intended use, which refers to the role(s) that a product is intended to play in the fulfilment of the essential requirements related to the part of the works covered by the CPD. The intended use is thus related to the function of a product in any part of the construction works. The technical specification must define the **end use condition(s)** on which the requirements concerning the product are based. This is essential for reaction to fire characteristics[20], but it may also be relevant for other characteristics.

4.4. **Level of product performance:** this will normally be based on the result(s) of a unique determination method directly related to the harmonised characteristic in question, together with the appropriate units. Where tests have a statistical aspect, a range of values or confidence limits may be used if specification writers consider

[20] EC Decision 2000/147/EC implementing Council Directive 89/106/EEC as regarding the classification of the reaction to fire performance of construction products.

this to be more appropriate. Normally, however, a single value will suffice, based on the statistical analysis.

If regulatory classes have been established by the Commission, according to Article 3 (2) of the CPD, it is the class achieved that shall be stated, not the test result.

In certain situations, a number of departures from these general principles can be envisaged, as follows:

- ***Classes of convenience*** [21]***:*** where the harmonised part of a European standard or the ETA provides for the use of classes of convenience (as defined in the Interpretative Documents, General, paragraph 1.2.2), these classes may be used as the means for expressing any of the harmonised characteristics, providing they do not incorporate other aspects of the non-harmonised part of the standard ot the ETA. The result of the determination method need not be stated, unless any ambiguity is likely to arise.

- ***Multiple determination methods:*** where a technical specification justifiably provides for more than one way of determining a characteristic (e.g. a method of test and a method of calculation, or a test with variable test conditions), the determined performance must be accompanied by a reference to the evaluation method used, unless the result is unambiguous. A shorthand form for indicating the method would be preferable.

Where the test conditions can change the stated characteristics of a product without this constituting a different intended use, additional information must be provided with the characteristic(s) concerned. For reaction to fire classifications (where it is necessary to simulate the end-use application conditions) the stated characteristics shall be related to the end-use conditions[22] specified in the product standard or referred to a separate document.

4.5. **Information not required:** as stated in paragraph 3.6, information explicitly identified by the reference to the technical specification itself need not accompany the CE marking:

- ***Generic values:*** where appropriate, technical specifications should give the producer the option of adopting a commonly accepted "generic", or "book" value for a particular characteristic, without the need for testing (e.g. thermal conductivity or water vapour permeability of well known materials). The generic values should be tabulated in the technical specification, or the reference to an appropriate supporting standard given.

- ***Levels of requirement:*** where a level of requirement (e.g. a minimum or maximum level) for a particular characteristic has been established by the Commission, this must be complied with by the producer.

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[21] Guidance Paper E on classes and levels.

[22] For example, on reaction to fire the statement may be "Class B-s1,d0 on a Class A2-s1,d0 or better substrate, Class C-s1,d otherwise".

In the above cases, the CE marking itself demonstrates compliance with the required value or level. However, where the producer adopts the "no performance determined" option for a particular characteristic, this must be made clear (see clause 3.6 above).

For commercial reasons, the producer should, of course, retain the right to test the product so as to demonstrate a better performance, and technical specifications should provide the rules for doing so. However, this additional information is not required to accompany the CE marking.

4.6. **Durability aspects:** technical specifications must indicate how the durability aspects of a product's performance are to be stated in the information accompanying the CE marking. Durability has many aspects, but for CE marking purposes it should generally be understood in terms of the degradation in performance of the product's characteristics when subjected to relevant actions. The statement of the results of appropriate methods of determination would be the usual way of expressing this performance, although only those aspects not implicitly covered by compliance with the technical specification need accompany the CE marking. In order not to delay the preparation of technical specifications, the state of the art at the time of preparation is to be applied.

4.7. **Testing in "end-use conditions":** technical specification writers need to address the issue of the form of accompanying information required where mandates indicate that products are to be tested in "end-use conditions", or as part of elements rather than on their own.

A number of options can be envisaged to simplify the testing regimes required, like the definition of a limited number of "standard" test configurations, together with application rules indicating the range of conditions for which the test result, or classification, remains valid. In certain cases, specification writers may also be able to define an assumed "worst-case" test configuration, allowing the producer to carry out a single test if he doesn't wish to claim a better performance.

A further option, which may be easier to implement, would be for technical specifications to define "proxy" characteristics of the product itself, which could be determined without requiring the testing of the finished element for this mandated characteristic. This possibility is already mentioned in some mandates, such as the use of density as a proxy for airborne sound insulation in masonry, but could also be considered in other circumstances.

4.8. **Dangerous substances:** information relating to the approach for dangerous substances is given in Guidance Paper H, which will be updated and supplemented as appropriate.

5. EC Certificate and declaration of conformity

5.1. The manufacturer, or his authorised representative established in the EEA, is responsible for the attestation of conformity of a product[23].

[23] CPD article 13.1

For a CE marked product, the manufacturer or the authorised representative established within the Community has to draw up a declaration of conformity, as required, when the product is placed on the market[24].

Where certification is required (AoC systems 1+, 1, 2+)[25], the manufacturer's declaration must incorporate a **certificate of conformity** covering those aspects that are under the responsibility of the relevant notified body. When a initial type testing is required to be performed by an approved laboratory (AoC system 3), then the manufacturer's declaration must incorporate the Initial Type Tests reports.

Whilst the CE marking circulates with the product, the declaration of conformity and the certificate of conformity, if appropriate, must only be made available by the manufacturer, or his authorised representative, in response to a substantiated request (e.g. national authorities responsible for market surveillance).

5.2. Annex III 4.2 and 4.3 of the CPD detail the requirements for the declaration and certificate of conformity, which comprise the items presented below (NB those items marked with an asterisk* are only required in the case of the certificate).

Where the declaration incorporates a certificate, the duplication of information between the declaration and the certificate should be avoided.

Also, useless duplication should be avoided between the declaration of conformity, especially concerning the description of the product (see 5.5 below) and the information accompanying the CE marking itself (in particular the indications linked to the characteristics and declared performances of the product)

Examples are provided in Annex 2.

5.3. **Name and address of the certification body*:** this shall be as notified to the Commission under Article 18 of the CPD.

5.4. **Name and address of the producer, or his authorised representative established in the EEA[26]:** the information provided here should be identical to that accompanying the CE marking (see paragraph 3.3), except in the case where the manufacturer has expressly designated a legal entity to act on his behalf within the EEA (his authorised representative). The latter must be established within the EEA, and could be identified here instead of the producer. For reasons of traceability, the place of production of the product in question shall also be identified, possibly in a coded format.

5.5. **Description of the product:** the description of the product shall include the product type (generic name, and, optional, trade name), any other information required to correctly identify the product (to be defined by specification writers), and a statement of the intended use(s) and/or end-use condition(s), as defined in the

[24] Guide to the implementation of directives based on the New Approach , paragraph 5.4

[25] CPD article 13.3.b)

[26] See , § 3.3

technical specification (see also paragraph 4.3). This section shall also include a copy of the information accompanying the CE marking giving indications to identify the characteristics of the product, as it is required in the Harmonised Technical Specifications.

5.6. **Provisions to which the product conforms:** reference to the EC legislation, and the generic harmonised standard(s) or the European technical approval or the national technical specification(s) referred to in Article 4 (3) to which the product conforms.

In addition, a reference to the Initial Type Testing test reports and Factory Production records may be provided in the declaration of conformity.

5.7. **Particular conditions applicable to the use of the product:** this information complements that given on intended use(s) or end use conditions above. Technical specifications should indicate the types of information required, if any, which could include limitations on the use of the product, actions that the client must take to use the product correctly, or information relating to correct installation where this affects the satisfactory conformity of the CE marked product (likely to be especially relevant for "kits"). Where reference is made to other products, this must be to generic product types, except in cases (e.g. ETAs) where it is directly linked to the product of a particular supplier.

If other similar cases of limitation of use apply, they will be implemented similarly to the above clauses.

5.8. **Name and address of the approved body, where applicable** *(NB. declaration only)***:** identification of any notified bodies involved by the manufacturer in the relevant system of conformity attestation. The identification number of the notified body will be sufficient, where this has been assigned by the Commission.

5.9. **The certificate number*:** a unique reference number allocated by the notified body consistent with the procedures agreed in discussions between notified bodies.

5.10. **Validity of the certificate*:** the certificate remains valid as long as the conditions relating to its issue have not changed significantly. This could refer to the product itself, the constituent products, the production system, or other factors. When not detailed in the technical specification, the notified body will provide an interpretation of the term “significantly” at the time of issue of the certificate, based on knowledge of the product involved. If conditions do change, the manufacturer has a responsibility to inform the notified body, so that measures may be taken to verify conformity[27]. If he fails to do so, he is making a false declaration. Although

[27] In case of ETAs, the manufacturer will need to contact the EOTA Approval Body to verify whether the ETA needs to be modified and if so, he needs to inform the Notified Body accordingly. Failing to do so, automatically leads to a false declaration of conformity, as the technical specification (the ETA) no longer corresponds with the product.

no certificate is involved, the same principles apply to an initial type test, whether carried out by the manufacturer or by a notified body[28].

5.11. Name and position held by the person empowered to sign the certificate or declaration: the person authorised by the legal entity responsible.

5.12. **Language:** the certificate or declaration of conformity shall be presented in the official language or languages of the Member State in which the product is to be used, or accepted by the Member State concerned. The producer retains responsibility for the translation, which shall be in conformity with national rules relating to translated documents. The group of notified bodies has prepared and translated a set of example certificates for all relevant attestation of conformity systems. These are available on the EC website (public part).

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[28] If the conditions relating to the product itself, the constituent, the production system or other factors have changed, the ITT report is no longer representative for the "new" product and the declared values have to be verified by the means of another ITT.

ANNEX 1: Examples of CE marking and accompanying information

These examples provide an illustration of the information required to accompany the CE marking. They are not intended to prescribe the format of presentation or to prejudge the type or amount of information to be provided, which will be for specification writers to determine, as appropriate to the product concerned and on the basis of the mandates.

Example 1 :

CE
XXX **03**
EN 12676

This is an example of the CE marking with minimal accompanying information. It may be used where the reference to the European standard for the intended use contains all the information required for this product. It can also be used where the technical specifications specify a combination of locations, e.g. simplified CE marking on the product itself, with the complete information appearing on the documentation accompanying the CE marking.
XXX is the name and address of the producer or the identifying mark of the producer

Example 2 :

CE
XXX **04**
EN 13163 **YYY** **Epaisseur:** 20 mm **Conductivité thermique–** $\bullet_D$ = 0.038 W/mK **Résistance thermique** R_D = 0,5 m^2.K/W

This example shows the CE marking applied to a thermal insulation product covered by AoC level 3.

XXX is the name and address or the identifying mark of the producer

YYY correspond to the definition of the product (including the possibility to use the trade name)

Example 3 :

CE **nnnn**
XXX **04** nnnn-CPD-zzzz
EN 13162 **YYY** **Thermal conductivity:** $\bullet_D$ = 0.037 W/mK **Thermal resistance:** R_D = 1,35 m^2.K/W **Fire classification** : A1

This example shows the CE marking applied to a thermal insulation product covered by AoC level 1 (due to fire aspects) including thermal characteristics which do not need to be certified (AoC 3).
***nnnn** is the identification number of the Notified Body involved in the attestation of conformity*
***XXX** is the name and address or the identifying mark of the producer*
***zzzz** is the number of the EC certificate of conformity*

***YYY** corresponds to the definition of the product (including the possibility to use the trade mark) which allows people know what the product concerned is, without any ambiguity*

Example 4 :

CE

XXX
05

EN 13043
Aggregate size: 6/10
Grading: G_c85/20
Shape of coarse aggregate:Fl20 / Sl NPD
Particle density: 2,70
Fine content: f2
Fines quality: NPD
Percentage of crushed and broken surfaces in coarse aggregate: NPD
Affinity of coarse aggregate to bituminous binders: NPD
Resistance to fragmentation of coarse aggregate : LA_{20}, SZ_{NPD}
Resistance to polishing of coarse aggregate for surface courses: PSV_{50}
Resistance to surface abrasion: AAV_{NPD}
Resistance to wear of coarse aggregate: MDE_{15}
Resistance to Thermal shock: NPD
Volume stability of steel slag aggregates: V_{NPD}
Chemical composition: Diorite
Dangerous substances: NPD
Resistance to freezing and thawing : F2 MS_{NPD}
Sonnenbrand of basalt : NPD
Durability against studded tyre : NPD

This example shows the CE marking applied to an aggregate (coarse aggregate) for bituminous mixtures and surface treatment for roads, airfield and other trafficked areas. Here, an AoC level 4 has been taken into consideration (without Notified Body intervention)
***XXX** is the name and address or the identifying mark of the producer*
NPD means that the producer uses the "No performance determined" option

Example 5: CE marking and other information (e.g. voluntary marks) for construction products

This example provides an illustration of the presentation of additional information, including voluntary marks as example. This is not intended to prescribe the format and the exact location of the frames, which will be defined in technical specifications. It does not intend also to prejudge the type or amount of information to be provided, other than those covered by CE marking, which will be determined by the producer himself on a voluntary basis or defined in technical specifications.

CE **nnnn**	*Any other information on the product such as:* *. date of manufacturer,* *. identification number of the product,* *. voluntary marks including information on what is covered or brought by this voluntary mark ,*
XXX **02** nnnn-CPD-zzzz	
EN 13162 **YYY** **Thermal conductivity:** • D = 0.037 W/mK **Thermal resistance:** RD = 1,35 m^2.K/W **Fire classification** : A1	

Example 6: CE marking for a construction product submitted to ETA

CE **nnnn**		***nnnn** is the identification number of the Notified Body involved in the attestation of conformity*
XXX **04** **nnnn-CPD-0001**		***XXX** is the name and address or the identifying mark of the producer*
ETA-98/0001 **ETAG N° 001, Part 1 and 2, Option 1** **M8**		*It is assumed here that the entire list of mandated characteristics and the declared performances of the product, or NPD option will be provided in the documentation accompanying the CE marking*

ANNEX 2: Example of EC certification and declaration of conformity

These examples provide an illustration of the information required for the EC declaration of conformity. There are not intended to prescribe the format by which this information has to be presented.

Example 1: CE marking for a construction product subjected to a harmonized standard

EC Declaration of Conformity	CE

The undersigned, representing the following:

Manufacturer[29] and the		authorised representative established within the European Economic Area[30]:
Construction Product Cooperation **1234 West Third Street** **Idaho, BV 9876** **USA**		**Construction Product Cooperation Limited** **Bankstreet, 65** **Cheshire, XW22LM,** **United Kingdom**
Manufacturing plant[31]:	CPC 003	

herewith declare that the products **CPC Door AB, AC and AD**

are in conformity with the provisions of the following EC Directive(s) when installed in accordance with the installation instructions contained in the product documentation[32]:

98/37/EC Machine Safety Directive

89/106/EEC Construction Products Directive

89/336/EEC EMC Directive as amended

73/23/EEC Low Voltage directive, as amended

and that the standards referenced below have been applied:

EN 292-1:1991" Safety of machinery - Basic concepts, general principles for design - Part 1 : Basic terminology, methodology"

EN 292-2:1991, incl. A1:1995 "Safety of machinery - Basic concepts, general principles for design - Part 2 : Technical principles and specifications"

EN 418:1992 "Safety of machinery – Emergency stop equipment, functional aspects – Principles for design"

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29 EC Guidance Paper D, §5.4. In the case of an authorized representative in the EEA, or in case of an importer (in the EEA), there is no legal requirement to identify the manufacturer.

30 EC Guidance Paper D, §5.4

31 EC Guidance Paper D, §5.4. In accordance with the Guidance paper, the manufacturing plant has been identified by codified reference. The technical documentation (as referred to below) should explain the code.

32 EC Guidance Paper D, §5.6. Generally, one EC Declaration may cover several directives, unless directives specify a specific form (e.g. Personal Protective Equipment directive).

EN 894-1:1997 Safety of machinery – Ergonomics requirements for the design of displays and control actuators – Part 1: General principles for human interactions with displays and control actuators"

EN 954-1:1996 "Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design"

EN 12650-1:2004 "Building hardware - Powered pedestrian doors - Part 1: Product requirements and test methods"

EN 14351-1:2004 " Industrial, commercial and garage doors and gates - Product Standard - Part 1: Products without fire resistance or smoke control characteristics"

EN 50081-2:1993 Electromagnetic Compatibility - Generic emissions standard - Part 2: Industrial environment"

EN 50082-2:1995 Electromagnetic Compatibility – Generic immunity standard - Part 2: Industrial environment

EN 60204-1:1997 "Safety of machinery – Electrical equipment of machines – Part 1: General requirements"

EN 61132-2:1994, incl. A1:1996 "Programmable controllers – Part 2:Equipment requirements and tests"

Provisions to which the product conforms[33]:

Characteristic	**Performance declaration**	**Report[34]**
LVD Compliance	EN 12650-1	CPC 2005001-1 (Technical documentation)
EMC Compliance	EN 50081-2 and EN 50082-2	CPC 2005001-2 (Technical documentation)
Machinery Directive	EN 292-1:1991, EN 292-2:1991, incl. A1:1995, EN 418:1992, EN 894-1:1997, EN 954-1:1996, EN 60204-1:1997 and EN 61132-2:1994, incl. A1:1996	CPC 2005001-3 (Technical documentation - incl. report 7777-20030089)
Construction Products Directive	EN 14351-1	CPC 2005001-4 (Technical documentation)
Resistance to wind load:	Class 3	6666-CPD-2003123
Resistance to snow and permanent load:	Class B	6666-CPD-2003124
Reaction to fire*:	Class C, s1, d0	6666-CPD-2003125
Watertightness:	Class 7A	6666-CPD-2003126
Dangerous substances:	None	6666-CPD-2003127
Impact resistance:	450 mm	6666-CPD-2003128
Load-bearing capacity of safety devices:	Pass	6666-CPD-2003129
Ability to release:	Pass	6666-CPD-2003133
Operating forces:	Pass	6666-CPD-2003134
Acoustic performance:	No performance determined	6666-CPD-2003135

33 EC Guidance Paper D, §5.6

34 EC Guidance Paper D, §5.6, this is not mandatory, but considered good practice.

Thermal transmittance:		
CPC Door AB:	2,2 W/m²K	6666-CPD-2003209
CPC Door AC:	2,4 W/m²K	6666-CPD-2003210
CPC Door AD:	2,8 W/m²K	6666-CPD-2003211
Radiation properties:	No performance determined	6666-CPD-2003136
*Particular conditions applicable to the use of the product, related to its reaction to fire characteristic[35]:	The test results only apply when the doorset is being installed with BG32® doorstrips.	

Description of the product[36]: **CPC Door AB, AC and AD**

PVC power operated external pedestrian doorsets (including unframed glass doorsets) for installation in vertical wall apertures, including related Inox hardware and weather stripping, supplied with double glazing. The difference between the CPC Door types AB, AC and AD is the thermal resistance performance.

Name and address notified certification body[37]: European Certifiers Ltd., Buckingham Palace Lane, 1, Glasgow, ER 32 BL, United Kingdom, notified under registration number 9999

Certificate number[38]: 9999-CPD-1111

Name and address notified laboratories involved[39]:

Excellent Machineproefname Instelling, Gravenschede 2, Rijswijk, BL 8765, The Netherlands, notified under registration number 7777

University of Torquay, Door mechanics Division, Brompton Street 34, Torbay, YY 87 UI, United Kingdom, , notified under registration number 6666

Manufacturer[40] and the	authorised representative established within the European Economic Area[41]:
Signature	Signature
Name: Louis Cattors Position: Supervisor, Standards Date: 2005-09-29	Name: Hendrik Thieigth Position: Technical Services Manager Date: 2005-11-29

35 EC Guidance Paper D, §5.7

36 EC Guidance Paper D, §5.5

37 EC Guidance Paper D, §5.3. The notification number is sufficient.

38 EC Guidance Paper D, §5.9. Only applies in case of AoC systems 1+, 1 and 2+

39 EC Guidance Paper D, §5.8

40 EC Guidance Paper D, §5.11. In the case of an authorized representative in the EEA, or in case of an importer (in the EEA), there is no legal requirement for the manufacturer to provide a signature on the declaration of conformity.

41 EC Guidance Paper D, §5.11

Example 2: CE marking for a construction product subjected to an ETA (this example corresponds with Example 6 of Annex 1)

EC Declaration of Conformity	CE

The undersigned, representing the following:

Manufacturer **XXX**

Manufacturing plant: YYY

herewith declares that the product **Mollo Anchor BX7** is in conformity with the provisions of the EC Directive 89/106/CEE when installed in accordance with the installation instructions contained in the product documentation, and that the **ETA-98/0001** has been applied.

Provisions to which the product conforms: **ETA-98/0001, ETAG N° 001, Part 1 and 2, Option 1, M8**

Description of the product: Torque-controlled shell type metal expansion anchor to be used in cracked and non-cracked concrete or in non-cracked concrete, M8.

Name and address notified certification body: European Certifiers Ltd., Buckingham Palace Lane, 1, Glasgow, ER 32 BL, United Kingdom, notified under registration number nnnn

Certificate number: nnnn-CPD-0001

Name and address notified laboratories involved:

Excellent Machineproefname Instelling, Gravenschede 2, Rijswijk, BL 8765, The Netherlands, notified under registration number 7777

University of Torquay, Door mechanics Division, Brompton Street 34, Torbay, YY 87 UI, United Kingdom, , notified under registration number 6666

Signature

Name: Ann Florus

Position: Technical Manager

Date: 2001-09-28

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

Brussels,
September 2002
ENTR/G5 PB

GUIDANCE PAPER E

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

LEVELS AND CLASSES IN THE CONSTRUCTION PRODUCTS DIRECTIVE

(Revision Sep 2002)

(originally issued following consultation of the Standing Committee on Construction at the 47th meeting on 01 July 1999, as document CONSTRUCT 99/337 Rev.1.
Updated following consultation of SCC Sep 02)

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.

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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/EEC[1] (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EC[2]. It also addresses the related issue of national provisions[3] 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/EEC[4].

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

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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).

minimum[9] 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 market[10]. 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 m^2.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 a product's performance to its intended use *(I.D.s section 1.2)*. Where

[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.

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 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

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

determined value of the characteristic shall always be declared with the CE marking, either on its own or accompanying the declared class[14].

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 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

[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.

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
Design and execution – competence of Member States. *1st whereas* Works must satisfy Essential Requirements (where subject to provisions containing such requirements). *Art. 3(1) and Annex 1* Essential Requirements have an influence on the technical characteristics of products. *Art. 3(1)* Member States may have different levels of essential requirement (due to differences in geographical or climatic conditions, ways of life and level of protection). *Art. 3(2)* Classes of essential requirement may be needed to take account of the above differences in levels of requirement. *Art. 3(2)* Levels of essential requirement are analogous to classes. Positive SCC opinion required to establish classes of essential requirement. *Art. 20(2)(a)* Obligation on Member States to use classes of essential requirement to set performance levels, if they have been established. *Art. 6(3)*	Give concrete form to the Essential Requirements on the works, indicating classes or levels for each requirement where necessary. *Art. 12(2)(a)* Indicate methods of correlating these classes or levels of requirement with the technical specifications (e.g. methods of calculation and proof, technical rules for project design etc). *Art. 12(2)(b)* Classification of product performance may be identified as the means of expressing the range of requirement levels of the work, on the basis of differences specified in Art 3(2) – "regulatory" classes. *IDs para 1.2.1* Positive SCC opinion required to establish regulatory classes. *Art. 20(2)(a)* 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. *IDs para 1.2.2* If needed, such technical classes would be established by specification writers, keeping the Commission and the SCC informed. *IDs para 1.2.2* They form an integral part of the technical specifications.	Play a part with respect to the Essential Requirements. *Art. 13(4)(a)* Must be fit for use – i.e. have such characteristics that the works, if properly designed and built, can satisfy the Essential Requirements. *Art. 2(1) and 4(2)* 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). Products need to be properly defined, which may give rise to threshold levels on composition or performance. 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. Products must comply with technical specifications. *Art. 4(2)* The above threshold levels of product performance thus form an integral part of the technical specifications.

EUROPEAN COMMISSION
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

December 2004

GUIDANCE PAPER F

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

DURABILITY AND THE CONSTRUCTION PRODUCTS DIRECTIVE

(Revision December 2004)

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.

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GUIDANCE PAPER F

DURABILITY AND THE CONSTRUCTION PRODUCTS DIRECTIVE

- This Guidance Paper was originally issued by the European Commission Services, following consultation of the Standing Committee on Construction at the 47th meeting on 1 July 1999, as document CONSTRUCT 99/367.

- It underwent some editorial changes, in September 2002, following consultation of the Standing Committee on Construction.

- It was updated in December, following a consultation of Standing Committee on the document CONSTRUCT 04/655 Rev.1

Acronyms used

AB: Approval Bodies (Bodies authorised by the Members States according to Article 10 of the CPD to issue European Technical Approvals)

AoC: Attestation of conformity according to Chapter V in conjunction with Annex III of the CPD

CEN: European Committee of Standardisation (Comité Européen de Normalisation)

CEN/TC: Technical Committee of CEN

CENELEC: European Committee for Electrotechnical Standardization (Comité Européen de Normalisation de l'Electricité)

CPD: Council Directive 89/106/EEC (Construction Products Directive)

CUAP: Common Understanding of Assessment Procedure for European Technical Approval without guideline (art. 9.2 of the CPD)

EOTA: European Organisation for Technical Approvals

EOTA/WG: Working Group of EOTA

ETA: European Technical Approval (CPD Chapter III type of "technical specification")

ETAG: Guideline for European Technical Approval

GP: Guidance Paper issued by the Construction Unit of the European Commission

hEN: harmonised European Standard (CPD Chapter II type of "technical specification")

IDs: Interpretative Documents (No 1 to No 6) according to Art. 3.3 of the CPD, as published in OJ C 62 of 28.2.1994, p. 1 – 163

NB: Notified Body (also called "Conformity Assessment Body" for others New Approach Directives). According to the CPD and Guidance Paper A, Notified Bodies includes *certification bodies*, *inspection bodies* and *testing laboratories*

DURABILITY AND THE CONSTRUCTION PRODUCTS DIRECTIVE

1. Scope

1.1. Durability is the property of lasting for a given or long time without breaking or getting weaker.

1.2. This paper addresses the issue of durability within the context of the implementation of Council Directive 89/106/EEC[1] (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EEC[2]. Only aspects related to the immediate production of technical specifications are considered.

1.3. 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/EEC[3].

2. References relating to durability in the CPD and IDs

2.1. CPD 2nd whereas – "Member States have provisions, including requirements, not only to building safety but also to health, durability, energy economy, protection of the environment, and other aspects important in the public interest."

2.2. CPD Article 3.1 and Annex I – Essential Requirements (applicable to works) shall be satisfied during an economically reasonable working life.

2.3. IDs, para 1.3.5 – "**Economically reasonable working life:**
(1) The working life is the period of time during which the performance of the works will be maintained at a level compatible with the fulfilment of the essential requirements.
(2) An economically reasonable working life presumes that all relevant aspects are taken into account, such as: costs of design, construction and use; costs arising from hindrance of use; risks and consequences of failure of the works during its working life and costs of insurance covering these risks; planned partial renewal; costs of inspections, maintenance, care and repair; costs of operation and administration; disposal; environmental aspects."

2.4. IDs, para 5.1(2) – "It is up to the Member States, when and where they feel it necessary, to take measures concerning the working life which can be considered reasonable for each type of works, or for some of them, or for parts of the works, in relation to the satisfaction of the essential requirements."

2.5. IDs, para 5.1(2) - "where provisions concerning the durability of works in relation to the essential requirement are connected with the characteristics of products, the mandates

1 OJ L 40, 11.2.1989
2 OJ L 220, 30.8.1993
3 OJ C 62, 28.2.1994

for the preparation of the European standards and guidelines for European technical approvals, related to these products, will also cover durability aspects."

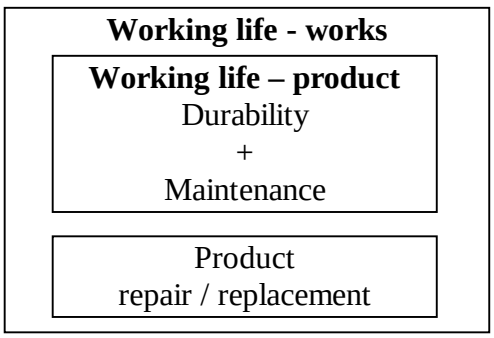
2.6. IDs, para 5.2 (1) – "Category B specifications and guidelines for European technical approval should include indications concerning the working life of the products in relation to the intended uses and the methods for its assessment."

2.7. IDs, para 5.2 (2) – "The indications given on the working life of a product cannot be interpreted as a guarantee given by the producer, but are regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works."

2.8. ID 1, para 4.3.1(3)(iv) - "durability (referred to the values of characteristics) is intended to mean the extent to which the values of the characteristics are maintained during the working life under the natural process of change of the characteristics, by excluding the effect of aggressive external actions."

2.9. ID 1, Appendix – identifies durability aspects for some products: "Durability (with respect to the values of the above characteristics and under the following actions)".

3. Definitions



3.1. ***Working life (works)*** - the period of time during which the performance of the works will be maintained at a level compatible with the fulfilment of the Essential Requirements.

3.2. ***Working life (product)*** - the period of time during which the performance of a product will be maintained at a level that enables a properly designed and executed works to fulfil the Essential Requirements (i.e. the essential characteristics of a product meet or exceed minimum acceptable values, without incurring major costs for repair or replacement). The working life of a product depends upon its inherent durability and normal maintenance.

A clear distinction has to be made between the assumed economically reasonable working life for a product (also called: *design working life*), which underlies the assessment of durability in technical specifications, and the actual working life of a product in a works. The latter depends on many factors beyond the control of the producer, such as design, location of use (exposure), installation, use and maintenance. **The assumed working life can thus not be interpreted as being a guarantee given by the producer.**

Technical specification writers will have to take a view about the "normal" working life of the products that they deal with. The assumed working life of a product should take

account of the assumed working life of the works, the ease and cost of repair or replacement of the product, maintenance requirements and exposure conditions.

3.3. ***Durability of a product*** - the ability of a product to maintain its required performance over a given or long time, under the influence of foreseeable actions. Subject to normal maintenance, a product shall enable a properly designed and executed works to fulfil the Essential Requirements for an economically reasonable period of time (working life of the product).

Durability is thus dependent on the intended use of the product and its service conditions. The assessment of durability can relate to the product as a whole or to its performance characteristics, insofar as these play a significant part with respect to the fulfilment of the Essential Requirements. In either case, the underlying assumption is that the performance of the product will be maintained at an acceptable level, in relation to its initial performance, throughout its working life.

3.4. ***Foreseeable actions*** – potential degradation factors that may affect the compliance of the works with the essential requirements. They include, for example, temperature, humidity, water, UV radiation, abrasion, chemical attack, biological attack, corrosion, weathering, frost, freeze-thaw and fatigue (i.e. actions related to "normal" agents that could be expected to act on the works or parts thereof).

4. Factors affecting durability

4.1. ***Exposure conditions*** – as the severity of actions related (e.g.) to climate and geography vary considerably across Europe, technical specifications should aim to define an appropriate range of exposure conditions and relate the assessment of durability to these. The definition of use categories for products may be a suitable manner to achieve this.

Examples of the types of exposure that should be considered are temperature variations (daily, monthly, annual, freeze-thaw conditions etc), incidence of solar radiation, humidity, rainfall, wind speed etc (i.e. related to "normal" use of the product).

4.2. ***Other*** – the chemical and physical characteristics of a product will have an influence on its durability. For example, some types of plastics may be susceptible to UV degradation, porous materials to freeze-thaw damage, composite materials to temperature variations etc. Such material-specific factors will need to be considered by specification writers, particularly in performance-based standards that potentially cover a wide range of different materials.

5. The verification of durability

5.1. The durability of construction products may be verified using performance-based methods, descriptive solutions or a combination of the two.

5.2. European technical approvals are based on examinations, tests and an assessment of the product *(Article 9.1)*, giving scope for both types of solution mentioned above. Again, a balance must be struck between performance testing and descriptive solutions, bearing in mind that information may be lacking on the acceptability of the latter. For innovative

products, rather than an extensive testing programme, an examination of the practical experience available in Europe for similar products may provide an appropriate solution.

Performance testing for durability

5.3. A main route to durability assessment involves the performance testing of a product to determine the variation in its characteristics under a given action or cycle of actions. The most common types of performance testing are :

- Direct testing – the achievement of a certain level of performance is recognised as being sufficient to give an acceptable durability (e.g. abrasion, fatigue, closing, and impact tests).
- Indirect testing – the measurement of "proxy" characteristics that can be correlated to actual performance and hence durability (e.g. porosity for freeze-thaw resistance and hardness for abrasion resistance).
- Natural weathering/ ageing tests – such tests either give a direct indication of durability (e.g. corrosion tests) or enable normal performance tests to be carried out after treatment, thus allowing the degradation in performance to be determined.
- Accelerated weathering/ ageing tests – as above, but with the normal ageing process speeded up to reduce the duration of the test.
- "Torture" tests – the product is subjected to conditions that are much harsher than those ever encountered in use (e.g. boil testing of glass reinforced polyester or laminated timber products).

5.4. Although performance testing can provide useful data on the degradation of performance over time, often allowing greater scope for innovation, it can be expensive and is still the subject of much research around the world, particularly in relation to service life prediction. To avoid unnecessary costs, alternatives to full-scale testing should be considered wherever possible.

5.5. As requested for each harmonised characteristic, the hEN or ETAG-CUAP should include only one assessment method per parameter to which durability is related. Where this is not practicable, however a hEN or ETAG-CUAP may contain more than one test method, provided that this can be justified in accordance with the mandate[4] and the results of the various tests are presumed as equivalent or correlated.

5.6. Durability should be assessed according to the current state of the art, therefore using one method of assessment which existed previously. Nevertheless, in some cases it may be necessary to develop a new test method for durability, but the production of the hEN/ETAG-CUAP should not, in general, be delayed by the development of a new method.

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[4] Chapter II.9 of all the mandates state that "*In general, only one method should be referred to for the determination of each characteristic, for a given product or family of products. If, however, for a product or family of products because of justifiable reasons, more than one method is to be referred to for the determination of the same characteristic, the situation must be justified. In this case all referenced methods should be linked by the conjunction "or" and an indication of application should be given. In any other case, two or more test/calculation methods for the determination of one characteristic can be accepted only if a correlation between them exists or can be developed. The relevant harmonised product standard must then select one of them as the method of reference"*

Descriptive solutions for durability

5.7. The non-testing route to durability consists of an experience-based description of a product or of related measures that are known to ensure adequate durability for a given product under assumed conditions (e.g. intended use, service conditions, working life, …). Examples are :

- specification of protective coating/ cover,
- composition/ thickness of material,
- recommendations on installation conditions in the works,
- specified maintenance requirements.

5.8. This type of solution is only suited to well-known construction products for which experience has been gained over a long period of time. The proposed solutions must take account of the intended use(s) of the product and be valid for the range of exposure conditions encountered in Europe (e.g. a descriptive solution providing acceptable durability in Southern Europe may not be appropriate for conditions further north).

6. The treatment of durability in technical specifications

6.1. All technical specifications elaborated in the context of the CPD must include provisions for the assessment of durability, taking into account the needs of the Member States and using performance-based methods, descriptive solutions or a combination of the two. They should be written in such a way that a product in conformity with the technical specification can be assumed to have a "normal" working life, subject to proper maintenance.

6.2. Whilst the CPD calls for European standards to be expressed as far as practicable in product performance terms *(Article 7.2)*, the condition 'as far as practicable' also applies to the method used for the verification of durability. Therefore, durability must not necessarily be verified by means of performance testing. Specification writers should adopt a pragmatic approach, striking a balance between the cost of testing, the additional information that can result from such tests, and the apparent simplicity of descriptive solutions. The latter, however, must not be used as an arbitrary means of discrimination between products or producers.

6.3. The current, generally accepted *"state of the art*[5]*"* is to be applied in dealing with durability in technical specifications for construction products. The development of performance-based methods of determination, however desirable from a technical point of view, should not delay the delivery of European standards and European technical approvals. Whilst the mandates tend to be expressed in terms of "the durability of characteristic X against action Y", it is recognised that the current level of knowledge is not always sufficient to follow such an approach. The use of indirect methods of assessment may provide appropriate solutions in such cases.

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[5] In this context, "state of the art" refers to the current level of knowledge that is generally accepted as being technically sound. It does not mean the most advanced technology.

6.4. The best judges of the *"state of the art"* are the specification writers themselves and thus durability is to be regarded as a purely technical matter to be dealt with by them[6]. By "state of the art", the CPD and its mandates ask CEN/TC - EOTA/WG to consider only those aspects of durability which are already required in at least one Member State, and for which a means of assessment exists. Specification writers of hEN or ETAs should not introduce new durability requirements in the first generation of technical specifications. Those who wish to develop new durability requirements, may do so for second-generation technical specifications, taking into account the time needed to develop the necessary assessment methods.

6.5. Where entirely descriptive solutions are proposed, compliance with the technical specification will normally indicate that the product meets the required criteria and no further information is required to accompany the CE marking. For performance testing, the general principles contained in the Guidance Papers D "CE marking" and E "classes and levels" should be followed.

6.6. In order to prevent undue barriers to trade, the use of prescriptive or descriptive solutions for durability should be limited to the minimum needed. When a harmonised technical specification provides for performance based requirements for mandated characteristics, the specification should systematically contain a basis for accepting equivalently performing products which deviate from a prescriptive or descriptive solution foreseen in the specification.

6.7. The same principles as for other characteristics for levels, classes and the "No performance determined" option, as set out in Guidance Paper E and Guidance Paper D, also apply to durability. Technical specifications must not exclude, by setting "high" requirements on durability, existing products that are already placed on the European market[7].

7. Attestation of conformity

7.1. The assessment of durability, as indicated in the technical specification, forms part of the attestation that products are in conformity with the requirements of that specification. The assessment is therefore carried out under the same system of attestation of conformity as for the product itself.

7.2. Under a given system of AoC for a product, different tasks may be performed by different parties[8]. The assessment of durability should be done by the same party that assesses the characteristic to which durability is related, even though this will not be always possible[9].

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6 Note, however, that Article 5.1 of the CPD constitutes a "technical" safeguard clause on the content of European technical specifications. The mandates also give the Member States the right to participate in the activities of specification writers through their national delegations/ bodies and to present their points of view at all stages of the drafting process.

7 See Guidance Paper E, clause 3.11 second and third bullet and clause 4.11 second and third bullet.

8 Additional guidance on the role and tasks of the notified bodies is included in Guidance Paper K.

9 For example, many products require attestation system 1 for reaction to fire and system 3 for other characteristics. In such cases, with an indirect assessment of durability, the assessment of durability should

8. Checklist for technical specification writers

8.1. What actions (potential degradation factors) are relevant for the family of products in question? The mandate gives an initial list, for which the Member States have indicated that they regulate, but this is not necessarily exhaustive. Consideration should be given to the intended use of the product, foreseeable service conditions and the potential variability in the severity of actions across Europe. The definition of exposure conditions and use categories should be considered where appropriate. Specific material-related aspects should also be considered, even within the context of purely performance-based specifications.

8.2. What assumptions are to be made about the "normal" working life of the product in relation to the possible intended uses? These assumptions underlie the assessment of durability and the severity of any proposed testing requirements. Current market practice should be followed wherever possible. Where different working life assumptions can be made for the same product, the technical specification should provide a means of distinguishing between the different assessments of durability (e.g. working life categories).

The technical specification need not make explicit reference to the working life assumed in the assessment of durability, but may do so if it is felt to be appropriate. In the latter case, it shall be made clear that the assumption does not constitute a guarantee from the producer as to the actual working life of his product. Table 1 below, developed by EOTA, provides an illustration of possible working life assumptions. Whilst useful as a guide, the figures provided need to be adapted to the specific product family in question.

8.3. What is the current, generally accepted "*state of the art*" for the family of products in question? This assessment will include a consideration of the current provisions and methods that are deemed to provide adequate durability and a review of available test methods, whether national, European or international in order to choose the assessment method and the technical requirement (see 5.7 and 5.8 above) which will be included in the harmonised technical specification. The possibility of adapting test methods developed by other technical committees or working groups should also be investigated.

8.4. The decision whether to adopt performance-based or descriptive solutions to assess durability, or a combination of the two, will depend upon the above analysis. The approach adopted should be practicable and respect the principle of proportionality – the least onerous possible procedure consistent with the objective sought. The underlying basis of the assessment should be readily apparent in the specification.

8.5. The requirements for information on durability to accompany the CE marking must also appear in the technical specifications. Guidance on these aspects is given elsewhere (GP D on CE marking and GP E on levels and classes).

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be assigned to a Notified testing laboratory or the manufacturer himself (system 3 or 4) rather than the product certification body (system 1 and 1+), given that it is the characteristics other than reaction to fire which are subject to durability. Another example can be the products for which the durability of a group of characteristics (or all) will be specifically assessed by a Notified Body specialised in this field.

9. Assessment methods

Hierarchy of methods. The ways in which durability may be dealt with in technical specifications (hEN or ETAs), in accordance with the current state of the art, are shown below in order of preference. This assumes that a performance based approach is used wherever practicable and that, in general, durability should be of a specific characteristic against an action. When a technical specification comes up for review, the treatment of durability should evolve towards the preferred method of assessment (i.e. option 1).

The examples shown here are to illustrate the principles. A technical specification may take different combinations of the options, depending on the nature of the product and the relevant durability requirements. Where a technical specification introduces either direct assessment or proxy testing, the CEN/TC - EOTA/WG should consider also giving lists of *'conventional accepted performance'*[10] products which, from experience, are known to meet the requirement without the need for testing.

9.1. Direct **assessment by testing or calculation (preferred)**. The product is subjected to a specific action after which one or more of the product characteristics are assessed.

For example "Subject the product to 1000 cycles alternating between 20°C and 80°C. After this, check whether the new performances of the product fulfil the requirements defined in the technical specification." In this case the specific characteristic "Durability of operational reliability against high temperature" has been assessed. This category may include natural or artificial weathering/ageing tests.

9.2. **Indirect (proxy) testing (of durability)**. The product is subjected to a specific action and criteria, for which there is known to be a correlation or relationship between the characteristic being tested and the required durability characteristic.

For example "After 100 cycles of freeze/thaw between 10°C and -20°C, the loss of mass shall be less than 5%". There is a '*correlation*', based on experience and knowledge, between mass loss and characteristics such as strength, but no explicit relationship between the two is established.

Another example: "Frost resistance shall be demonstrated by the water absorption of the product. Frost resistant products shall have absorption less than 10%."

9.3. **Protection requirements**. The hEN or ETA specifies that all products shall be protected (e.g. by coating or painting). In such a case, it may set, for example, minimum thicknesses and types of coating, but does not have to. Consequently, the technical specification will need to require that the producer provides the exact thickness and type of coating as declared value in the CE marking. It may also require the manufacturer to give advice with the CE marking, without taking direct responsibility for the installed product. This, for example, may be done on the commercial documents with the statement "To ensure satisfactory durability, this product, when used externally, should after installation be painted or otherwise protected with … [*indication of the protective product and/or other details*].". For products subject to an ETA, this information is provided in the chapter of the ETA that contains assumptions and recommendations.

[10] See Guidance Paper M, clause 3.5. This concept can be designated as « deemed to satisfy »

9.4. **Prescriptive requirements**. The standard "prescribes" certain conditions linked either directly or indirectly to durability. This may be, for example, the material type, its density and its thickness. This often requires that there is previous knowledge of the performance of the product in service, so that experience has demonstrated that products of the defined type are, indeed, durable.

For prescriptive requirements, a clause of equivalence allowing the use of equivalent products should be systematically introduced, in hEN or ETAG-CUAP.

9.5. **Indirect assessment**. Indirect assessment differs from proxy testing (see 9.2 above) in that, in the latter, there is a relationship between the proxy characteristic and the desired durability characteristic whereas, in the former, there is no such direct relationship, only a link. For an indirect assessment, it is assumed that a product which meets some or all of the requirements defined in the standard (especially strength requirements) will be inherently durable. For this approach to work, the standard has to set threshold values against those characteristics relevant for assessing inherent durability, otherwise the principle does not apply. In some very limited cases[11], durability may be assessed indirectly by visual assessment, as long as the criteria for such assessment are defined.

10. References to durability in Technical specifications

10.1. Like all other technical characteristics under the CPD, durability requirements shall be a full part of the specification text. For standards, durability may also be included in a normative annex. For this characteristic, it will be necessary to provide the declaration of the performance if the manufacturer is intended to sell the product in a country where the characteristic is regulated, and might be declared (but the NPD option is also possible when selling the products in countries where there is no regulation on it).

10.2. For products covered by standards, an informative annex may give advice on the link between the durability as stated by the manufacturer and the likely performance of the product in end-use conditions (see Guidance Paper D) or, where the standard provides for different levels of durability performance, the level necessary for a given use.

10.3. For products covered by standards, there should be one or more specific entries for durability (unless indirect assessment is being used) in Annex ZA, Table ZA.1. The results of durability assessment have to be part of the CE marking, with the marking of durability being subject to the same principles as for any other characteristic. If the performance cannot be known by reading the standard itself (e.g. the standard contains simple pass/fail requirements), something needs to be stated (see Guidance Paper D 3.6, b, note 1), otherwise it may be stated if desired).

10.4. If direct or indirect testing is used then (subject to the preceding paragraph), the test results have to be shown as part of the CE marking. When the technical specification (hEN or ETA) uses protection requirements, the protection used should be stated with the marking; where prescriptive provisions are included in it (e.g. material type, and the standard covers more than one type of material), the description of the provisions would also need to be marked.

[11] For products subject to ETA, such an assessment is normally undertaken before issuing the ETA.

11. Some considerations on choice of test methods

11.1. Any test method for durability must be technically appropriate and adequate, and have an appropriate level of repeatability and reproducibility. The correct choice should be independent of who will perform the test (manufacturer or test laboratory). Although it is desirable that any test method should be as simple as practicable, there are cases where this is not appropriate and a more complex method needs to be given. However, considerations of whether such tests could be best performed by manufacturers or external laboratories should not be a decisive factor in deciding the suitability of any method. In any case, the use of a third party is always possible, even where the system of attestation of conformity determines that the producer can carry out the test (e.g. voluntary use of a test laboratory by a producer under CPD system 4).

11.2. It is also recognised that some tests related to durability may take time to perform. The time involved may be a factor in the choice between competing test methods but should not be a factor in determining whether a particular test method is acceptable. . If the characteristic to be assessed requires, technically, a time to perform, then this has to be accepted.

11.3. It must be recognised that anyone (manufacturer, authorised agent) making an unjustified claim about his product is breaking the law, especially when any unjustified claim is apparently "guaranteed" by the CE marking. Test laboratories, whether notified or not, also have a responsibility to ensure that tests are properly carried out.

11.4. Technical specifications must set the requirement at the level that is technically appropriate for the product itself, not for any other reason. Anything else has to be dealt with in the framework of market surveillance and control. Durability specifications should be based on technical necessity only. They may not include aspects of market surveillance or take its place.

12. Examples

Durability by performance testing

12.1. "The resistance to SO_2 shall be proven in a test cycle by alternating storage in a warm SO_2 atmosphere and a laboratory atmosphere. Following exposure, the test sample is submitted to the crushing test."

12.2. "Durability of operational reliability against fatigue - Subject the spring to (5000 +/- 10) cycles of normal operation at a rate not exceeding 6 cycles per minute. Record any fracture or rupture. No fracture or rupture shall be permitted."

Durability using descriptive solutions

12.3. "The following table shows the minimum concrete cover of reinforcement related to different ambient conditions. The cover appropriate for the intended end use shall be used, and its value stated."

12.4. "The tightness of elastomeric sealing joints is presumed to be durable if the joint itself is in conformity with the requirements of the standard and if the sealing elements have been correctly selected and conform to EN 681. Note: the joint needs to be installed according to the manufacturer's instructions."

12.5. Metal components shall be protected with one of the following levels of protection/coating, whichever is relevant for the associated level of exposure."

Table 1: Indicative design working life
(Table 2.1 of EN 1990:2002 Eurocode – Basis of structural design)

Design working life category	Indicative design working life (years)	Examples
1	10	Temporary structures (1)
2	10 to 25	Replaceable structural parts, e.g. gantry girders, bearings
3	15 to 30	Agricultural and similar structures
4	50	Building structures and other common structures
5	100	Monumental building structures, bridges, and other civil engineering structures
(1) Structures or parts of structures that can be dismantled with a view to being re-used should not be considered as temporary.		

Table 2: Illustrative assumed working lives (design working life) of works and construction products
(from EOTA Guidance Document 002, page 2)

Assumed working life of works (years)		Working life of construction products to be assumed in ETAGs, ETAs and hENs (years)		
Category	Years	Category		
		Repairable or easily replaceable	Repairable or replaceable with some more efforts	Lifelong [2]
Short	10	10 [1]	10	10
Medium	25	10 [1]	25	25
Normal	50	10 [1]	25	50
Long	100	10 [1]	25	100

[1] In exceptional and justified cases, e.g. for certain repair products, a working life of 3 to 6 years may be envisaged (when agreed by EOTA TB or CEN respectively).
[2] When not repairable or replaceable "easily" or "with some more efforts".

Table3: Illustrative assumed service lives of works and products (from ISO 15686-1)

Design life of building	Inaccessible or structural component or components where replacement is expensive or difficult (including below ground drainage)	Major replaceable components	Building services
100	100	40	25
60	60	40	25
25	25	25	25
15	15	15	15
10	10	10	10

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
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GUIDANCE PAPER G

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

THE EUROPEAN CLASSIFICATION SYSTEM FOR THE REACTION TO FIRE PERFORMANCE OF CONSTRUCTION PRODUCTS

(Revision May 03)

(originally issued following consultation of the Standing Committee on Construction meeting on 09th December 1999. Updated following consultation of SCC May 03)

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.

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THE EUROPEAN CLASSIFICATION SYSTEM FOR THE REACTION TO FIRE PERFORMANCE OF CONSTRUCTION PRODUCTS

1. Scope

This Guidance Paper addresses issues relating to the functioning of the European system for the classification of the reaction to fire performance of construction products (Euroclasses), within the context of the implementation of Council Directive 89/106/EEC (OJ L40 11.2.1989) (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EC (OJ L220 30.8.1993). Arrangements for the transition from existing national classifications for fire performance to the new European systems are dealt with in Guidance Paper J – Transitional arrangements under the CPD. This can be found at http://europa.eu.int/comm/enterprise/construction/internal/guidpap/guidpap.htm.

The Guidance Paper is intended for technical specification writers (CEN/CENELEC and EOTA members), regulators and enforcement authorities within the European Economic Area (EEA) and industry. References to Member States in the document also apply to the EEA/EFTA States.

2. Definitions

Product family	Refers to a set of generic products having a similar intended use (e.g. internal wall finishes, roof coverings).
Product sub-family	Refers to a subset of a product family, grouping together products having a similar nature (e.g. wall panels, flat and profiled roof sheets) or behaviour (e.g. products that melt or shrink under flame attack).
Generic product	Refers to a set of products, grouping together the whole European market (e.g. plasterboard, fibre cement sheets).
Product	Refers to a construction product, as defined by the CPD, from an individual producer (i.e. the item to which the CE marking applies).
Product type	A "type" may cover several versions of a product provided that the differences between the versions do not affect the level of safety and the other requirements concerning the performance of the product (c.f. initial type test). The direct field of application of a fire test will effectively define the type for fire safety purposes (e.g. products of a different colour will normally be of the same type).
Product range	Refers to a set of similar products that a producer places on the market, comprising one or more product types with different performance (e.g. a range of products with varying thickness and/or density).
Intended use	Refers to the role(s) that a product is intended to play in the fulfilment of the essential requirements of the CPD *(definition in the IDs)*. The intended use is thus related to the function of a product in a construction works.
End-use application	Refers to the typical conditions in which a product would be incorporated into a construction works. It thus concerns a real application of a product, in relation to all aspects that influence the behaviour of that product under different fire situations. It covers aspects such as its quantity, its orientation, its position in relation to other adjacent products and its method of fixing.
Field of application of a classification	Refers to the range of end-use applications for which a given classification is considered to be valid.

3. Introduction - current state of play

The Euroclasses system for reaction to fire is described in Commission Decision 2000/147/EC (OJ L50 23.02.2000). This Commission Decision became fully operational with the publication of the Single Burning Item (SBI) test method (EN13823) and the classification standard for reaction to fire (EN13501-1) in February 2002.

The decision covers all construction products, as defined by the CPD, with its Table 2 applying to floorings and Table 1 to all other products.

The EC Fire Regulators Group (FRG) has thus far defined a single reference fire scenario for the Euroclasses system (fire in a room) and a single large-scale reference test to represent this scenario (the Room Corner test – ISO 9705). The initial role of this reference test was to facilitate the development of the classification system described in Table 1 of the Decision.

The classification system foreseen in the Euroclasses decision can be considered to be complete and directly applicable to all products. The only exceptions to this principle are where the classification based on the small-scale tests is not appropriate (Article 1.2 of the decision) or where a review of the treatment of some families of products indicates that an amendment to the decision is necessary (footnote to Table 1 of the decision "*The treatment of some families of products, e.g. linear products (pipes, ducts, cables etc) is still under review and may necessitate an amendment to this decision*").

4. Further development of the classification system

As mentioned above, it may be necessary to further develop the Euroclasses system to accommodate intended uses that present hazards not sufficiently well covered by the existing system *(e.g. the current reference scenario/ test, and hence the classification system, is not appropriate to the fire hazard)* or to deal with products whose test behaviour presents particular difficulties *(i.e. where the classification on the basis of the small-scale tests referred to in Tables 1 and 2 of the decision is not appropriate)*.

a) The definition of additional reference scenarios

A number of reference fire scenarios can be envisaged to represent real fire hazards, of which the "*fire in a (small) room"* is one. Other potential scenarios include "*fire in linear products*", "*façade fire*" etc. If the reference scenario (fire development in a room) selected as the basis for Table 1 of the Euroclasses decision is not considered to be appropriate for products in certain intended uses, then there may be a deficiency in the current classification system for these products. Any such deficiency would need to be addressed, using the procedure described below and shown diagrammatically in Annex 1. However, as a rule, new reference scenarios should only be considered if the determining factors in relation to the development of fire are significantly different and the regulatory authorities in the Member States cannot satisfactorily adapt their regulations to the currently defined system.

Table 1 : Procedure for defining a new reference scenario

Applies to :	Product families, product sub-families and generic products for particular intended uses [1].
At the initiative of :	Member States (e.g. fire regulators), CEN/ CENELEC/ EOTA, European Industry Federations or the Fire Sector Group of notified bodies.
Addressed to :	European Commission, who will then consult the EC Fire Regulators Group and, if a proposal is agreed, the Standing Committee on Construction.
Procedure :	The inappropriateness of an existing reference scenario has to be demonstrated and an alternative proposed. The fire hazard condition and its relevance shall also be indicated, together with a suitable large scale test that can be shown to be representative of the proposed new hazard scenario. If the FRG considers the proposal to be well founded, it will then determine (either itself or on the basis of recommendations) the functional performance criteria upon which a product is to be judged in the new reference test (e.g. no flashover in a room, extent of fire spread from storey to storey via a façade etc) and, if required, any parameters that need to be measured or observed to express these criteria (e.g. time to flashover, heat release, flame spread, smoke production, occurrence of flaming droplets etc). At this point, assuming the proposal receives a positive opinion of the Standing Committee on Construction and is adopted by the Commission in an appropriate form, enough information is available to allow the declaration of the reaction to fire performance of a given product on the basis of the new large scale test and the functional criteria. In theory, the process could therefore terminate here. However, given the expense of large-scale tests, industry (and Member States) may prefer to take the process further. In this case, a suitable small-scale test (or tests) that can be shown to correlate with the new reference test has to be defined. The existing small-scale tests, modified or not, should be the starting point and only if a correlation cannot be established should other tests be investigated. Once the small-scale test (or tests) has been defined, then a new classification system covering the families of products for the given intended use can be established and a revision to the Euroclasses decision proposed. Any new classification system, or declaration of performance on the basis of functional performance criteria, will need to be clearly distinguishable from the currently defined classifications.
Outcome :	Normally, a revision of the Euroclasses decision, with the addition of a new table to cover the hazard condition. A new reference scenario will usually lead to the use of a new subscript to differentiate the classification.

b) Dealing with the inappropriateness of classification based on small-scale tests

For certain products the classification based on (e.g.) the SBI test might not be considered to give a true reflection of the reaction to fire performance (i.e. it does not represent real fire behaviour well enough). Use of the reference test(s) could then be envisaged to give a truer reflection of reality. Any such problems would be addressed using the procedure described below and shown diagrammatically Annex 1.

[1] It could also be considered that the reference test defined for a given reference fire scenario does not adequately represent all of the associated hazards for all types of products for a given intended use. In this case the same procedure would be followed.

Table 2 : Procedure relating to inappropriate classifications

Applies to :	Product families, product sub-families and generic products.
At the initiative of :	Member States (e.g. fire regulators), CEN/ CENELEC/ EOTA, European Industry Federations or the Fire Sector Group of notified bodies.
Addressed to:	European Commission, who will then consult the EC Fire Regulators Group and, if a proposal is agreed, the Standing Committee on Construction.
Procedure :	The inappropriateness of the current test(s) has to be demonstrated, based on a lack of correlation with the underlying reference test for the products or application under consideration, e.g. due to physical behaviour in the test (e.g. melting, shrinking, de-lamination, deformation etc). It should also be demonstrated that the reference test itself is able to deal adequately with the family of products concerned. If the FRG considers the proposal to be well founded, it can agree that the reaction to fire performance of the products in question shall be determined on the basis of the satisfaction of the functional performance criteria defined for the reference test (e.g. no flashover, limited smoke production, no flaming droplets etc), using any relevant parameters considered necessary (e.g. time to flashover, heat release etc). The resulting declaration of performance for the product will be the same as that for the small-scale tests correlated to this reference test. Alternatively, a new small-scale test, correlated to the existing reference test could be developed, although this procedure would take rather longer to put into place. Adaptation of another existing test is another possibility. ***Note :*** the problem may be identified as relating to the current description of the test method in question rather than its inappropriateness (e.g. mounting/ fixing rules in the SBI test, the description of the test sample as having a particular form etc). In this case, instructions would be given to CEN/EOTA to modify the test conditions, either within the test EN or through a derogation within a product EN, ETAG or CUAP instead of authorising the use of the reference test.
Outcome :	The Commission will determine on a case by case basis the most appropriate means to implement the proposal, which may necessitate an amendment to the underlying decision.

5. Appeals by producers against a given classification

The classification of the reaction to fire performance of construction products shall be on the basis of the tests described in the current "Euroclasses" decision or any future developments of it as described above. Recourse to, and classification on the basis of, large-scale reference tests is not permitted unless specific provisions have been made according to the above procedures.

Unless a product is genuinely unique, any problems arising in the testing and classification of construction products (e.g. unsatisfactory test completion) will be generic and hence applicable to all manufacturers of products having the same character. To ensure consistent classification and a level playing field, any such problems shall be dealt with according to the procedures described in section 6. For unique products presenting particular difficulties, a process to agree specific testing protocols, possibly involving the Group of Notified Bodies (see below), will need to be developed.

In some Member States, the national Fire Regulations on works foresee the possibility for producers or designers to demonstrate compliance with those regulations in a number a ways, including fire safety engineering techniques and the use of large-scale tests. Such procedures

fall outside the scope of the CE marking and Euro-classification systems, but may continue to operate at the national level in addition to the European system [2]. However, they must not constitute a means of arbitrary discrimination or a disguised restriction on trade between the Member States (e.g. procedures must be open and transparent and must not specify national fire laboratories as the only route to compliance etc).

Examples of the latter include the use of a large-scale façade test to demonstrate compliance with a Member State's fire regulations (e.g. in the case where requirements on façades are expressed in terms of the existing Euroclasses) and the use of functional regulations that do not refer specifically to classes. It is up to the Member State with such regulations to determine which solutions are acceptable in that country.

6. How should products be classified?

In order that the European system can work in an efficient and transparent manner, it is important that all parties have a common understanding as to the meaning and use of product classifications. Products shall therefore be classified according to the following principles :

The basis and field of application of a given classification shall be readily identifiable in the information accompanying the CE marking, as well as in the classification report. Details given with the CE marking should however be brief, with a reference made to the classification report for further information.

Generic products shall be tested and classified in a consistent manner throughout Europe (e.g. in relation to mounting and fixing the test specimens).

A product shall be tested so that, as far as possible, the classification relates to its performance in end-use application [3]. Where the end-use application is known with some certainty (e.g. kits supplied complete with fixings and installation instructions), the product shall be tested accordingly. Where the end-use application is not known, the product shall be tested in standardised conditions (e.g. using standard substrates and representative mounting conditions). Non-standard configurations may be tested at the request of the producer, although the applicability of such a classification is likely to be limited.

As the potential contribution of a product to a fire can vary as a function of end-use application, a single product may have different classes corresponding to the test configuration adopted (e.g. tested on combustible and non-combustible substrates).

In order that the above principles can be respected, it is important that the European standards, ETAGs or CUAPs provide clear instructions to producers and test laboratories. As far as possible, generic standardised solutions should be described in the fire test and classifications standards. If necessary, further specific provisions could be incorporated into product specifications (European standards and European technical approvals), on condition that they do not distort the market in favour of a particular type of product or material.

Product standards, ETAGs or CUAPs could thus contain two levels of instruction with regard to reaction to fire testing :

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[2] This does not, of course, include the continuation of national classification systems after the co-existence period. Nor would the results of such procedures affect the CE marking or Euro-classification of the products themselves.

[3] This does not exclude the possibility to request tests for products incorporated within building elements, which are also covered by the decision (as in the 1994 version).

A simple statement such as “The product shall be tested in a configuration representative of its end-use application, respecting the general test conditions laid down in the European test standard. If a producer provides installation instructions, these shall be followed as regards mounting and fixing. The test conditions shall be indicated with the CE marking, where relevant.”

Alternatively, specific rules for the mounting and fixing of products for fire testing can be incorporated into the hENs, ETAGs or CUAPs themselves, on condition that they respect the general test conditions laid down in the European test standard. To ensure this and to maximise the field of application of the tests, CEN TC127 shall be consulted. Cases of disagreement will be dealt with by the Commission, in consultation with the FRG.

The Member States have a responsibility not to create new barriers to trade through the imposition of national test configuration rules (e.g. in relation to the mounting and fixing of products). Thus, their regulations must be adapted to accommodate the solutions proposed in the European standards and European technical approvals.

The issue of the field of application of a particular classification is of great concern to industry, as it has an impact of the amount of testing required for a given product. Rules for both the direct and extended application of classifications will need to evolve on a continuous basis as a result of experience gained with the European test methods. Initially, information collected by the Group of Notified Bodies will enable provisional rules to be developed, leading naturally over time to established rules that can be incorporated into standards and other technical specifications.

7. Role of the Group of Notified Bodies

The Group of Notified Bodies (GNB) has been set up by the Commission to ensure that close co-operation is maintained between the Notified Bodies. The aims and objectives of the GNB are :

to promote mutual confidence and transparency between all approved bodies and the enforcement authorities within the EU;

to achieve a consistent application of the conformity requirements by all approved bodies;

to ensure that full information is available to all interested parties, on the scope and competence of approved bodies and the services provided;

to advise in the development of the technical specifications for products.

The GNB includes an Advisory Group and a number of Sector Groups. The Advisory Group is primarily responsible for policy and procedural matters common to all the Sector Groups and for communication of appropriate advice to the Standing Committee on matters appropriate to implementation of attestation of conformity procedures. The various Sector Groups have been set up to deal with specific types of products. In addition there are two ‘horizontal’ Sector Groups, one dealing with *dangerous substances* and the other with *fire safety*. The horizontal Fire Sector Group (FSG) is charged with ensuring that matters relating to fire safety are dealt with in a consistent manner across the various product Sector Groups.

The FSG thus represents a valuable European resource that can be harnessed to help resolve difficult issues in an efficient manner. Its role is to help implement the European system on the basis of the defined classification procedures as set out in the various Commission Decisions.

The role and responsibilities of the FSG include:

documenting agreed interpretations of fire test methods, where the CEN standard may be ambiguous or incomplete in its specification;

developing ad-hoc testing protocols for products whose behaviour is such that the conventional test procedures produce misleading results;

developing ad-hoc conventions relating to the extended application of test results for both reaction to fire and resistance to fire (i.e. complementary to the work of CEN in this area).

All of these activities are considered important in order to facilitate products to be CE marked effectively and meaningfully for their fire performance and with the broadest scope of end use applications within the context of parts of works. With respect to the latter, the work on extended application is particularly important.

The Commission, in consultation with the Member States, will ensure that the boundaries of the FSG's work are well defined and not in conflict with the advisory status of the GNB. The FSG will maintain close relations with the EC Fire Regulators' Group and present a report to each meeting.

The FSG group works and disseminates information exclusively using CIRCA (an internet based communication tool).

8. Systems of attestation of conformity

In most Commission Decisions laying down the systems of attestation of conformity (AoC) for construction products, aspects related to reaction to fire are treated in a similar manner, as illustrated by the example in Table 3 below. Thus, the system of AoC normally varies according to both the Euro-classification and the susceptibility of the reaction to fire performance to change during production.

Further guidance in relation to the application of the asterisks is given in Annex 2.

Table 3 : Example of an AoC decision for reaction to fire [4]

Product(s)	**Intended use(s)**	**Level(s) or class(es)** ***(reaction to fire)***	**Attestation of conformity system(s)**
Thermal insulating products (factory-made products and products intended to be formed in-situ)	For uses subject to regulations on reaction to fire	A1*, A2*, B*, C* --------- A1**, A2**, B**, C**, D, E --------- (A1 to E)***, F	**1** ------- **3** ------- **4**

4 Table (2/2) from Commission Decision 99/91/EC, published in OJ L29, 3.2.1999 as amended by 2001/596/EC

System 1: See CPD Annex III.2.(i), without audit-testing of samples
System 3: See CPD Annex III.2.(ii), Second possibility
System 4: See CPD Annex III.2.(ii), Third possibility
* Products/ materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)
** Products/ materials not covered by footnote (*)
*** Products/ materials that do not require to be tested for reaction to fire (e.g. Products/ materials of classes A1 according to Commission Decision 96/603/EC, as amended).

9. Who provides the classification?

(a) Fire classification is an integral part of the CE marking placed upon the product and, therefore, it is for the Notified Body involved (under systems 1 or 3) to provide the classification. The classification will be part of a classification report, delivered by the Notified Body, based upon one or more test reports and possibly an extended application (EXAP) report. If a product is subject to attestation of conformity system 2 or 4 then it is for the manufacturer to give the classification[5]. However, a manufacturer may seek the advice of a Notified Body in this area. In any case the requirements of the fire classification standards will have to be fulfilled as they are called up in the harmonised product standards.

(b) Once a product is CE marked with the fire class then no Member State can ask for additional information in relation to the classification other than that available in the supporting reports (classification, test, extended application).

(c) If a Member State considers that its Notified Bodies are not able to give the classification and requires the involvement of a committee or Ministry to determine the class, then this should form part of the notification requirements for that Notified Body. There are no implications for the product manufacturer. The classification will be part of the classification report and his only contact point will be the Notified Body[5].

(d) However, that Member State must accept CE marked products arriving on its territory from another Member State, and will not be able to demand that the test reports are subject to any committee to determine the class, as the class will already be given in the CE marking, and must be respected.

(e) The situation for products using ETAs for CE marking is slightly different. The ETA document will include the fire classification and where appropriate the EXAP rules for the product. If the approval body completing the ETA is not a Notified Body competent for fire, then they will sub-contract this task to a Notified Body competent for fire testing and classification. Once the ETA is completed a Notified Body may become involved in the evaluation of conformity process. The Notified Body involved has only to ensure the conformity of the product with that described in the ETA.

[5] for products covered by ETAs see paragraph 9.5

ANNEX 1: Summary of principles underlying the development of the Euroclasses system – for information

The fundamental principles described in this Guidance Paper, and embodied in the existing Euroclasses system for reaction to fire, may be summarised as follows :

- The FRG, on the basis of real or perceived fire hazards, may decide upon appropriate reference fire scenarios. *[The current Euroclasses system for the reaction to fire performance of all products other than floorings is based upon fire development within a room]*

- The perceived hazard condition(s) associated with any reference fire scenario should be defined by the FRG in functional terms. *[The current Euroclasses system for the reaction to fire performance of all products other than floorings uses the time to flashover as the behavioural reference]*

- A large scale (reference) test representative of a particular reference fire scenario shall be agreed by the FRG as the fundamental basis for the evaluation of the fire performance of products in relation to their potential fire behaviour. *[The current Euroclasses system for the reaction to fire performance of all products other than floorings uses the ISO 9705 Room Corner test. The time to flashover (and related parameters) in that test is identified as the underlying basis of the main classification]*

- In the absence of any small scale test with correlated performance against the large scale test, products will be evaluated on the basis of their performance in the large scale test, against the agreed functional performance criteria. *[Not applicable to the current Euroclasses system]*

- If a small scale test(s) with correlated performance against the large scale test is available, the FRG may endorse this and an associated classification system, as being appropriate for regulatory purposes within the EU. If this is the case, all products concerned shall be evaluated using the small scale test(s) and the related classification system. *[The current Euroclasses system for the reaction to fire performance of all products is based on small-scale tests]*

- Subject to certain conditions (as indicated in this paper), where the small scale test and related classification, is considered to be deficient, products may be submitted to the large scale test and their performance level evaluated against the functional criteria defined for that test. Any resulting classification will be expressed in the same manner as for the small-scale tests, unless there is a change in reference scenario. Where relevant, the results of the small scale test shall always be reported in conjunction with the results of the large scale test.

Finally, Table 1 of the current Euroclasses decision is, in principle, applicable to all construction products other than floorings. Deviations from this defined system, either relating to the reference scenario or recourse to the reference test, should only be considered where absolutely necessary.

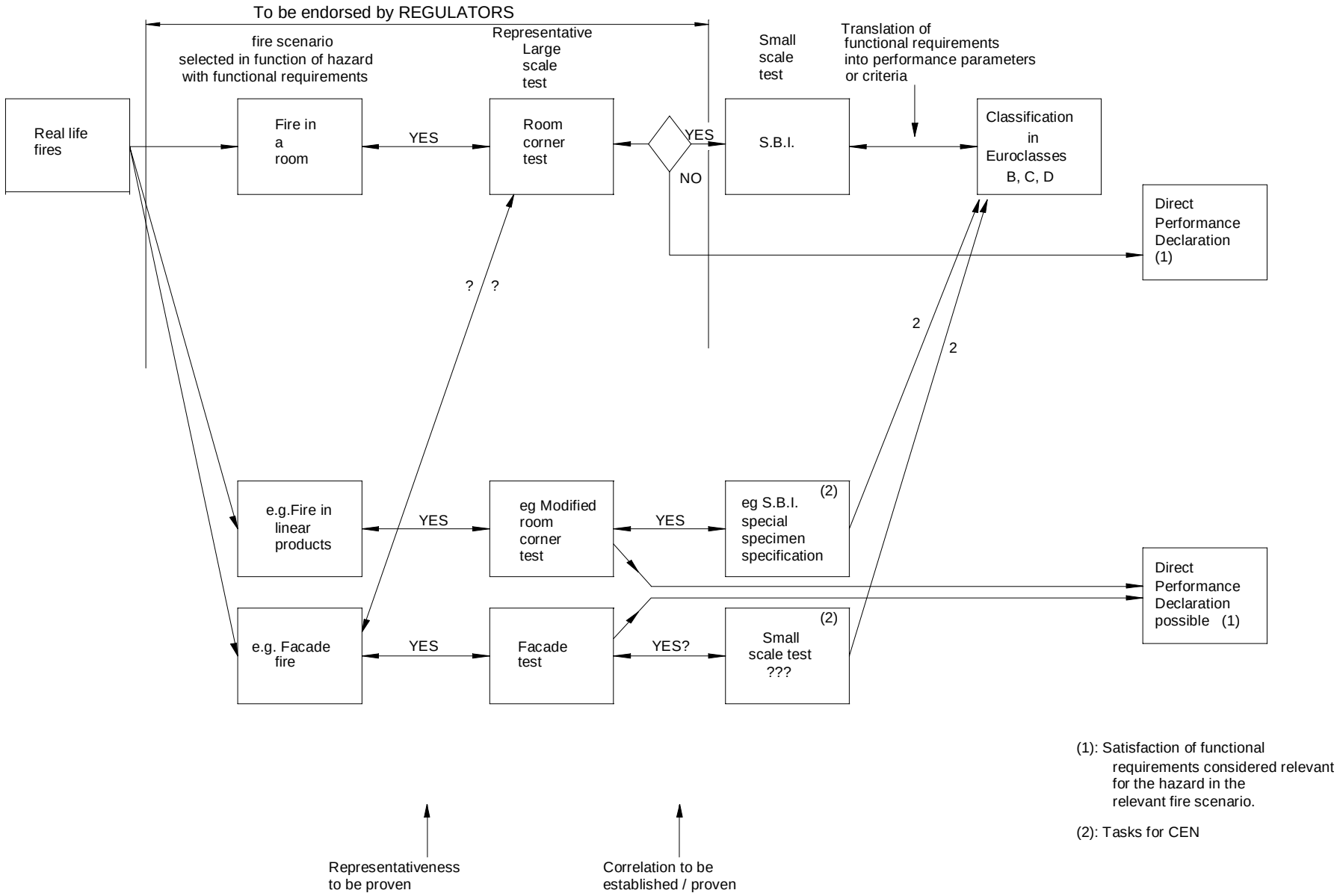
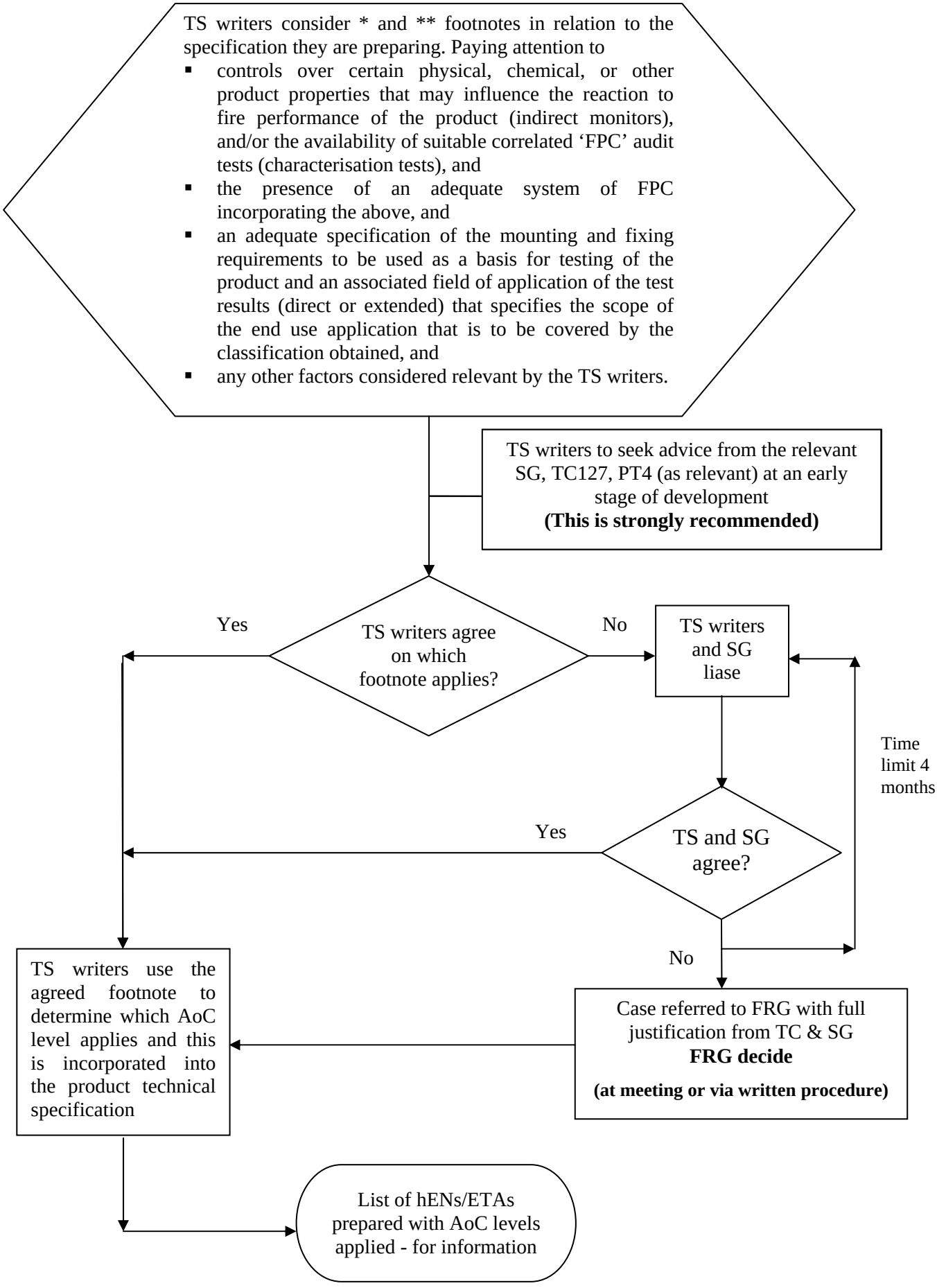


Figure 1 – diagrammatic representation of the development of the Euroclasses system – for illustration only

ANNEX 2: Application of * and ** footnotes.



TS = Technical specification - includes harmonised product standards (CEN) and European Technical Approvals (EOTA)
SG = Sector Group of Notified Bodies

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Conformity and standardisation, new approach, industries under new approach
Construction

Brussels,
September 2002
ENTR/G5/MF

GUIDANCE PAPER H

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

A HARMONISED APPROACH RELATING TO DANGEROUS SUBSTANCES UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

(Revision Sep 2002)

(originally issued following consultation of the Standing Committee on Construction at the 48th meeting on 09 December 1999, as document CONSTRUCT 99/363 Rev.1.
Updated following consultation of SCC Sep 02)

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.

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A HARMONISED APPROACH RELATING TO DANGEROUS SUBSTANCES UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

1 Scope

1.1 This Guidance Paper is intended to describe a harmonised approach on addressing the problem of dangerous substances[1] and preparations[2], as well as radiation, when related to products falling under Council Directive 89/106/EEC[3] (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EC[4]. It explains the extent to which the Directive applies to dangerous[5] substances and how technical specification writers (CEN/CENELEC and EOTA members) should take them into account to achieve harmonisation. Technical specifications shall provide all the relevant details for a given construction product and in particular the necessary information required for a producer to be able to complete the CE marking.

1.2 The Guidance Paper is aimed at those involved in the writing of technical specifications[6] (harmonised standards and European technical approvals), for consideration together with the respective mandates and provisions given therein, and manufacturers, regulators and enforcement authorities within the European Economic Area (EEA).

1.3 This Guidance Paper is limited to those aspects of the CPD essential requirement No.3 "Hygiene, health and the environment" that are linked to the presence of potentially dangerous substances in construction products. They do not consider those aspects of health, hygiene and environment that are related to the manufacture of products or their function (e.g. faulty disposal of wastewater). The Guidance Paper does not cover construction products in contact with water intended for human consumption.

1.4 None of the provisions of this Guidance Paper restricts Member States, with due regard to the Treaty, from maintaining laws, regulations, and administrative provisions[7] covering the use of products outside the scope of the CPD. As long as they conform with the provisions of the Treaty, e.g. voluntary schemes for the protection of the environment, which could provide an effective means for dealing with dangerous substances, they are not excluded by this Guidance Paper, although they too fall outside the scope of the CPD.

In practice it may be difficult to separate the substances related to the wider environmental risks from those affecting the immediate environment of works, and

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[1] Substances mean chemical elements and their compounds in the natural state or obtained by any production process.

[2] Preparations mean mixtures or solutions composed of two or more substances.

[3] OJ No L 40, 11.2.1989

[4] OJ No L 220, 30.8.1993 Even if this Guidance Paper only mentions the original Directives/decisions (as in most cases), it is always the latest version/amendment that is referred to.

[5] In this Guidance Paper the term "dangerous substances" will be used as meaning substances, preparations and radioactive substances that may present a danger for man and the environment during normal use of construction products when installed in works.

[6] The Guidance Paper is also aimed at those who write guidelines for European technical approvals.

[7] In this Guidance Paper the term "national provision" will be used, meaning national law, regulation or administrative provision.

therefore a strict distinction of which risks fall inside or outside the scope of the CPD could be somewhat theoretical (see also paragraph 2.2 below).

2 General principles

2.1 The scope of the CPD, and the link between the CPD and provisions on dangerous substances, can be characterised as follows :

a) Harmonisation introduced by the CPD in relation to dangerous substances falls under essential requirement No.3, Hygiene, Health and the Environment. The requirement is defined, in relation to works, by Annex 1 of the Directive as follows:

"The construction works must be designed and built in such a way that it will not be a threat to the hygiene or health of the occupants or neighbours, in particular as a result of any of the following:
- *the giving off of toxic gas,*
- *the presence of dangerous particles or gases in the air,*
- *the emission of dangerous radiation,*
- *pollution or poisoning of the water or soil,*
- *(...)*

b) The requirement is further defined and developed according to five specific aspects in the Communication of the Commission with regard to the interpretative documents[8] of Directive 89/106/EEC, namely:

Indoor environment;
Water supply;
Wastewater disposal;
Solid waste disposal;
Outdoor environment.

"Other directives relevant to hygiene, health or the environment, for example the protection of workers, must also be taken into account when elaborating technical specifications (...)"

c) In terms of requirements on construction products, the safe disposal of waste does not raise any issues relating to dangerous substances, as covered by this Guidance Paper. Interpretative Document No.3 develops the other relevant aspects above as follows:

[8] OJ No C 62, 28.2.1994, p. 1

Indoor environment: *"(...) The characteristics necessary for satisfactory performance (...) are listed below. Harmonised technical specifications are required to measure these characteristics or to calculate performance where technology permits. (...) Products are those for which emission of pollutants to the indoor air are possible (...). Product characteristics apply to all product families and systems:*

- emission of volatile organic compounds and release of other pollutants, taking account of the concentration of pollutants in the product where necessary,

- (...)

- *radioactive* emissions."

Water supply : *"Harmonised technical specifications are required to specify the following characteristics of construction products:*

a) Material in contact with water[9]

- migration of pollutants (...)"

Outdoor environment : *"(...) To conform with the scope of the Directive this document is restricted to works in use.*

For the other phases of the life cycle, as long as no Community legislation exists it is up to the Member States, with due observance of the Treaty, to take into account the scope of the Directive and, when they deem it necessary, to prescribe requirements affecting construction products in order to limit the deterioration of the environment.
(...)
The requirement is concerned with the protection of people and with the prevention of any impact on the immediate environment by pollution of the air, the soil and the water.
(...)
Technical specifications are required to define the following characteristics :
(...)
- release of pollutants to outdoor air, soil and water, taking account of the concentration of pollutants in the product, where necessary. (...)"

[9] A special European scheme will be elaborated for approval of construction products in contact with water intended for human consumption and therefore this Guidance Paper does not cover these products. Other products used for water supply, i.e. products not in contact with water intended for human consumption, are covered.

2.2 Three general principles can be drawn from the above:

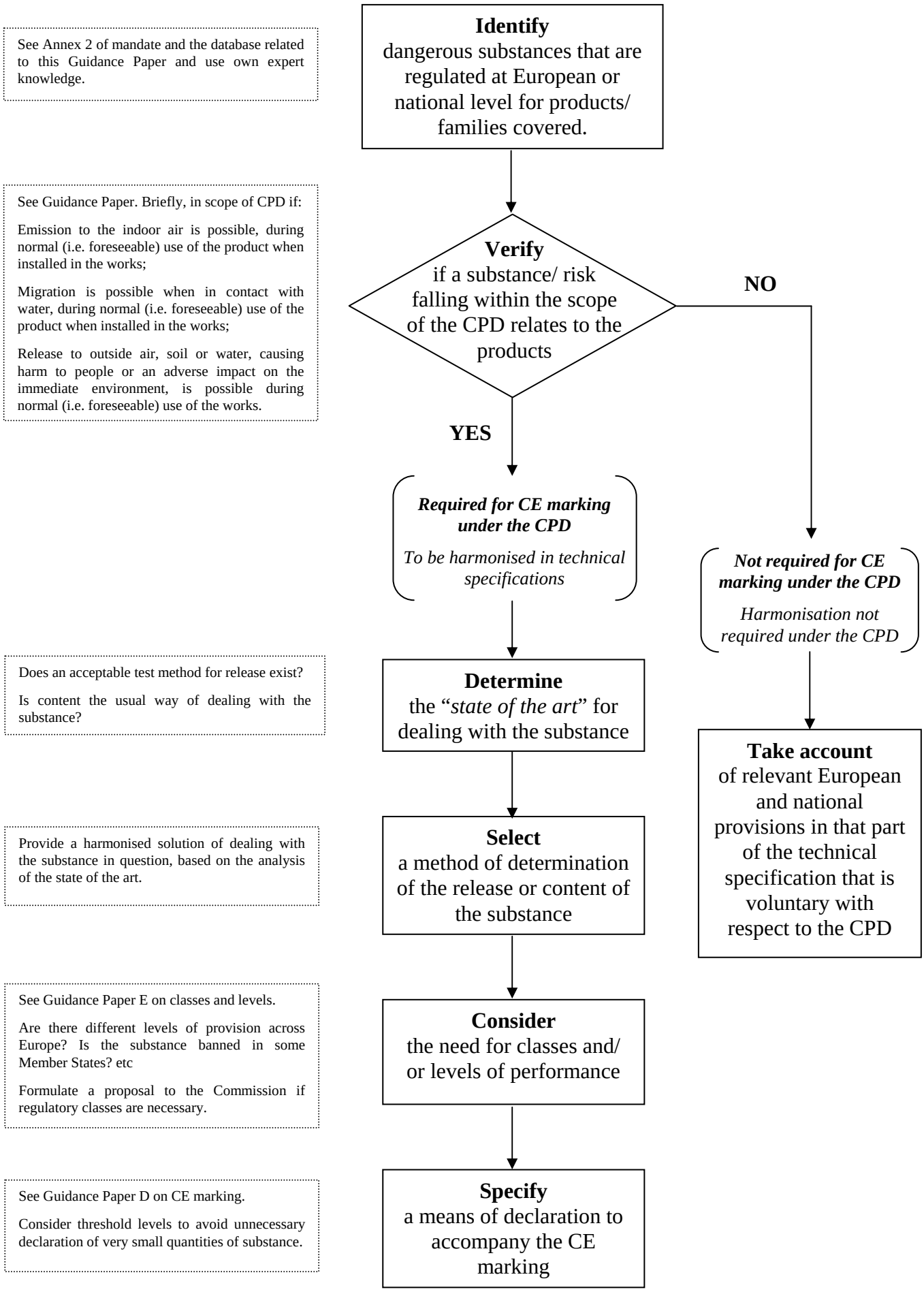
(i) Aside from the protection of people (occupants and neighbours), it is only the immediate environment that falls within the scope of the CPD. Wider environmental aspects, such as destruction of the ozone layer, are not covered. Although the term "immediate" is not defined in the interpretative documents, it can be taken to mean those parts of the environment that are influenced by direct effects of the products or works in question.

(ii) To conform with the scope of the CPD the harmonised approach relating to dangerous substances is limited to "works in use". Other phases in the life cycle of a product, i.e. its excavation or production stages, during the building process, during demolition, waste disposal, incineration or waste reuse (except where reuse is as a construction product in the sense of the CPD) are not considered for harmonisation under the CPD.

In addition, activities such as maintenance, replacement or other construction activities carried out during the normal life of a building might cause dangerous substances to arise from products already installed in the works. These activities are considered to be outside the scope of the CPD. It is the responsibility of the Member States to make procedural provisions if, on the basis of knowledge of the process or product involved, such activities are likely to lead to potentially harmful situations. Of course, any construction products used, for example for replacement, remain within the scope of the CPD.

(iii) The requirement on products is expressed either as emission or migration of dangerous substances or radiation, during normal (i.e. foreseeable) use. It is, therefore, when possible, the release of substances, that is the characteristic to be controlled. However, even if it is not the content of the dangerous substance itself in the product that should be controlled, this might be the only practicable solution (see also paragraph 3.13 below).

3. Guidance for technical specification writers – steps to be taken



Identify regulated dangerous substances of relevance for construction products

3.1 For the CE marking technical specification writers should identify all regulated dangerous substances given in the mandate and/or included in the database related to this Guidance Paper (see Annex 2), that during normal use are necessarily present in products, or a family of products covered by the technical specification. The substances that might be found in a construction product are either in the original constituents used or created in the process of manufacturing. It can be assumed that the specification writers have the best knowledge about this and thus are capable of identifying the substances. The most common substances mentioned in the mandates are asbestos, formaldehyde, cadmium, pentachlorophenol, radioactive substances and heavy metals (e.g. harmful through leaching).

3.2 The database of this Guidance Paper contains as complete a list as possible of dangerous substances of relevance for construction products, currently regulated either at Community level and/or at Member State level. In addition, only new or amended national provisions that will be notified by Member States in the framework of the Directive 98/34/EC[10] will be listed in the future. The Commission services have produced the database in collaboration with the Member States and it will be continuously updated with information on changes in existing provisions and about new ones. To make the information workable a database is the most appropriate tool for listing of substances and the related legislation and it is available for everyone on the Internet site[11] of the Commission.

3.3 The database is informative with the aim of providing support for specification writers, but cannot be considered exhaustive and it does not reproduce the full texts of the directives or other Community or national legislation to which it refers. In order to keep the information up to date Member States are requested to communicate any changes in their national provisions to the Commission. Member States should also, when possible, provide information about their existing methods of determination as well as limit values for the substances they regulate.

3.4 The listed substances in the database are supposed to be relevant for construction products covered by mandates issued under the CPD, but of course not all the substances and quoted legislation apply to every product. The fact that a substance is considered as dangerous does not automatically mean that the product that contains it is also dangerous. If there is a risk of release or content of the substance in the product, this is to be taken into account on solid scientific grounds (see also 3.13). The database lists about 115 substances or groups of substances that are of particular concern for EU/Member States.

3.5 Specification writers must carefully check the accuracy of the information in the database and the relevance for specific construction products since the provisions are often general and the restrictions or bans apply to all products placed on the market. The annex should <u>not</u> be regarded as a “black list” of substances that could not be used at all. It only gives information about the relevant legislation, without any assessment of the risks caused by the specific substances.

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[10] OJ No L 204, 21.7.1998, p. 37

[11] http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain.htm

Verify if a substance that fall within the scope of the CPD relates to the products

3.6 Section 2 of this Guidance Paper describes what is considered to be within the scope of the CPD, and therefore will form part of the CE marking (the exception being that the regulation of the substance is already harmonised at Community level). The dangerous substances are regulated in three different ways to ensure an adequate level of protection for man and the environment. These differences need to be identified by the specification writers because producers are responsible for knowing and complying with all relevant provisions for the products covered by the technical specification.

- Regulated at Community level - Producers always need to satisfy harmonised requirements and meet certain limit values (ranging from restriction to total ban) at Community level regardless of the kind of construction product they manufacture. Thus, it will not be necessary to provide this information with the CE marking, even if it is within the scope of the CPD. The general provisions on substances and the specific product legislation are complementary elements and the first have to be met irrespective of the latter. An example would be the content of all types of asbestos[12], which has been totally banned throughout the Community (however there will be a transitional period of five years).

- Regulated at Community level with national derogation - If the dangerous substances are the subject of harmonised legislation at Community level and national provisions have been allowed to derogate from this, there is a need to provide information with the CE marking since there are different levels of requirements. An example would be the content of cadmium[13] for which some Member States have stricter provisions while others follow the Community requirement.

- National provisions - If the dangerous substances are not the subject of harmonisation at Community level but fall within the scope of the CPD, and there are different levels of requirements and/or different determination methods between Member States, these differences in levels must be taken into account and the methods have to be harmonised. An example would be the release of formaldehyde, which should be declared with the CE marking and treated as described in paragraph 3.10.

3.7 Legislation on dangerous substances may also exist outside the scope of the CPD, either at Community level and/or at national level (as described in 3.6). Although outside the scope of the CPD and not part of the CE marking, technical specification writers should, where appropriate, take this legislation into account since a common approach in this area would be welcomed. Information about such legislation could e.g. for the harmonised standards be included in an informative annex. The technical specification need not repeat the text of the legislation but should make a cross-reference to it. This information will not be required to accompany the CE marking, unless the EC directive in question leads to CE marking in its own right.

Determine the "state of the art"

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12 Commission Directive 1999/77/EC, OJ No L 207, 6.8.1999, p. 18

13 Commission Directive 1999/51/EC, OJ No L 142, 5.6.1999, p. 22

3.8 Specification writers should determine the "state of the art"[14] for the dangerous substances, which have been identified according to the steps described above, regarding test methods or other methods of determination, taking note of descriptive solutions that may be justified.

3.9 The best judges of the present, generally accepted, "state of the art" for the products are the specification writers themselves. Specification writers should make a review of available test methods[15], whether national, European or international and the possibility of using or adapting methods developed by other technical committees or working groups should be thoroughly examined. Where current knowledge or appropriate methods of determination, for example for measuring the release of a substance, are lacking, a pragmatic approach like using the content should be taken, rather than starting to develop new test methods. More or less all substances can be dealt with by declaring either the release or the content.

Select a harmonised method of determination for each dangerous substance

3.10 A performance characteristic for a product relating to dangerous substances has to be taken into account by the technical specification writers. The characteristic should, in principal, be treated in the same manner as any other performance requirement listed in the mandates. That is, it should be subject to a harmonised method of determination, have a prescribed form of declaration to accompany the CE marking, and maintain the use of the "no performance determined" option. However, it is acknowledged that complete harmonisation in this area will not always be possible in the short-term, in which case technical specification writers should apply the "state of the art" principle referred to above.

3.11 As far as possible, available horizontal test methods should be used. If necessary, the harmonised product standard should complement the horizontal method by including provisions on sampling and preparation of specimens.

3.12 The characteristic of the product relating to dangerous substances should preferably be expressed in terms of the release, or emission, of the substance, or radiation. Where practicable, this is how the substance should be assessed, directly or indirectly, in performance terms and the result declared with the CE marking. But, as stated above, this depends on the "state of the art".

3.13 Descriptive solutions, such as limits on the content of the dangerous substance, where a clear relationship between content and release exists in end-use conditions, or the specification of a special surface treatment that prevents release, may be justified if it is not possible (no method), or very expensive, to determine the rate of release or emission of a dangerous substance. However, it is recognised that a relationship between content and release cannot be established for some substances and thus a declaration of content can be acceptable to accompany the CE marking. In particular

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[14] In this context, "state of the art" refers to the current level of knowledge that is generally accepted as being technically sound. It does not mean the most advanced technology.

[15] Where the "state of the art" consists of two or more methods of determination, the instructions given in the mandates for dealing with this type of situation must be followed.

this is applicable for substances and preparations for which there are restrictions on the marketing and use, as laid down in Council Directive 76/769/EEC[16].

3.14 Another descriptive solution would be to check the constituents since it can be assumed that a construction product does not contain or release dangerous substances if all the constituents used have been controlled in this aspect. Several producers of components and suppliers of raw materials may be involved in contributing to the final product. Only the producer who manufactures the specific construction product is responsible for the conformity of the product when it is placed on the market. The producer shall make sure that all applicable requirements on dangerous substances for the components and/or raw materials used have been fulfilled. To control this, the producer could use normal legal contracts between himself and the suppliers. The producer of the final construction product then need not do any further testing, unless the product is modified or the production process causes change.

3.15 Descriptive types of solution are better suited to well known construction products for which experience has been accumulated over a long period of time. The proposed solutions must take account of the intended use(s) of the product. Where entirely descriptive solutions are proposed, compliance with the technical specification will normally indicate that the product meets the required criteria and no further information is required to accompany the CE marking

Consider and define threshold levels and/or propose classes

3.16 Technical specifications must take account of the different required levels of protection existing either in Community legislation or in national provisions. The "zero content" or "substance banned" situations must be dealt with in the specifications when it falls within the scope of the CPD. An example would be the case of pentachlorophenol (PCP), where Community legislation allows it to be included in limited quantities in some products but where some Member States have stricter provisions. For relevant products a declaration on the content (or applicable class) of PCP in the product should accompany the CE marking.

3.17 Specification writers should, where appropriate, define thresholds[17] (or possibly classes) for the levels of emission of dangerous substances or on the content. For example threshold levels for radiation could be fixed in the specifications and if the determined value is below this level, the product is in compliance with the specification and the value does not have to be declared with the CE marking. However, if the determined value is higher than the level, the value needs to be declared. The threshold level could be set at what is considered to be effectively zero, which in this case could be the level of natural radioactivity that is unavoidable and causes no danger to the user of the works.

Specify a means of declaration to accompany the CE marking

3.18 Specification writers should specify a means of declaration to accompany the CE marking[18], if it is not considered to be covered by compliance with the technical

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16 OJ No L 262, 27.9.1976, p. 201

17 See the Guidance Paper E on levels and classes in the CPD for more information.

18 See the Guidance Paper D on CE marking under the CPD for more information.

specification directly, bearing in mind the option of “no performance determined”. The form of presentation of the determined values or a declaration on “zero content” required to accompany the CE marking must be given in the technical specification (see examples below). Technical specifications shall also clearly indicate which actions have to be undertaken by either the notified bodies or by the manufacturer, in relation to the requested level of attestation of conformity as laid down in the relevant Commission decision.

ANNEX 1

Examples

The following examples are indicative and only presented as an illustration of the principles given in this guidance paper. They shall not be regarded as discriminatory towards certain products or be seen as complete for the different dangerous substances of relevance for construction products. The examples do not give prejudice to specific technical specifications.

E.1 **Thermal insulation product** - The technical specification could deal with at least the following for a thermal insulation product (e.g. factory made mineral wool), applying the "state of the art".

Information that has to accompany the CE marking because it falls within the scope of the CPD:
- release of formaldehyde *(to be tested, threshold levels could be used)*
- emission of radioactive substances *(to be tested, threshold levels could be used).*

Optional information that could be presented in an informative annex of the standard because it is considered to be outside the scope of the CPD:
- information about which countries regulate on release of fibres (could include descriptive specifications of acceptable methods of sealing or providing barriers to prevent emissions of particles and fibres and other substances from the surface or on design and installation)
- information about the handling of the product, e.g. related to worker safety, like Commission Directive 97/69/EC[19] adapting to technical progress for the 23rd time Council Directive 67/548/EEC[20] on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances. This Directive lays down that certain man-made vitreous (silicate) fibres have carcinogenic effects and therefore an identification, classification and labelling of these fibres should be made. However, the classification as a carcinogen need not apply if it can be shown that the substance fulfils the conditions given in the Directive.

E.2 **Wood-based panels** - The following is a proposal for the product standard on wood-based panels in which it could be possible to make use of a level for the release of formaldehyde that effectively creates two classes (above and below a level). The class then has to be stated with the CE marking (the classes A and B are for example only):

"Where formaldehyde is added to the product as a part of the production procedure, the subsequent release of formaldehyde shall be assessed by testing to ENV 717-1 and the results shall be classified as follows:
A - emission of 0.1 ppm or less
B - emission of > 0.1 ppm
This requirement does not apply to products having naturally occurring levels of formaldehyde, which may be classified A without the need for testing.

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[19] OJ No L 343, 13.12.1997, p. 19
[20] OJ No 196, 16.8.1967, p. 1

Once initial classification has been obtained by testing to ENV 717-1, routine control of the production may be by any test method shown to correlate, for the product in question, with ENV 717-1."

E.3 **Radioactivity in construction products** – Radioactive substances occur naturally in many materials used also for construction products (e.g. aggregates and natural stone tiles) but radiation can also come from artificial sources (e.g. industrial by-products and incinerator residues) and contaminated materials. The concentration of different radionuclides should be measured (Bq/kg) and the "activity concentration index" calculated. The calculated value should be declared with the CE marking only when the value is above a threshold given in the specification. The threshold could for example be the same as the gamma dose present in the earth's crust, which would mean, "effectively zero" (some thresholds for natural radioactivity have been presented in a guidance developed by an expert group established under the terms of Article 31 of the Euratom Treaty). The risk for higher concentrations of radionuclides mainly exists when for example certain constituents are added to the products. The declared value will make it possible for regulators/designers to estimate the annual effective dose of radiation (mSv) and thus see if the regulatory requirements on the works can be met.

E.4 **Timber products (treated)** - A declaration about the content of pentachlorophenol (PCP) used in wood preservatives should accompany the CE marking because it falls within the scope of CPD and different levels of requirements exist.

- *EU legislation*: PCP shall not be used in a concentration equal to or greater than 0,1% by mass in substances or preparations placed on the market,

- *National derogation legislation*: e.g. Germany prohibits preparations containing more than 0,01% of pentachlorophenol and products treated with these preparations must not contain more than 5 mg/kg (parts per million – ppm). The Netherlands has completely prohibited the use of PCP in the treatment of wood and textiles.

E.5 **Flooring products and wall coverings** - measurement of emissions can be done, and thus a value can be declared by using ENV 13419 part 1-3 which gives a general harmonised method (part 1-2) for the determination of volatile organic compounds (VOC) from construction products. Part 3 ("Procedure for sampling, storage of samples and preparation of test specimens") of the standard contains annexes for different products and in the future more annexes will be included with the assistance of the product technical committees. Instead of developing specific product/material test methods for measuring emission, references should be made to this horizontal method.

However, the declared emission value might be meaningless since it seems that no Member State has regulations related to VOCs and no limit values have been set in national provisions. Nevertheless, on a voluntary basis due to market request, the information could be useful for different parties involved in the construction process when evaluating the impact certain products may have on the indoor air quality. It could also be a tool for promoting development of improved products.

ANNEX 2

The Commission services have set up a database with information about dangerous substances and applicable national and EU legislation. This way of presenting the information is aiming at making it as user friendly as possible and it also provides an easy tool to keep it up to date. The database is accessible through the Internet, i.e. the construction site (http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain.htm). This means that this Guidance Paper will contain a "living" annex, in the form of a database, which can easily be adapted to changes.

All interested parties are asked to continuously give their comments on the content of the database.

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

Brussels,
September 2002
ENTR/G5 PB

GUIDANCE PAPER I

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

THE APPLICATION OF ARTICLE 4(4) OF THE CONSTRUCTION PRODUCTS DIRECTIVE

(Revision Sep 2002)

(originally issued following consultation of the Standing Committee on Construction at the 49th meeting on 28/29 March 2000, as document CONSTRUCT 00/395.
Updated following consultation of SCC Sep 02)

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.

THE APPLICATION OF ARTICLE 4(4) OF CONSTRUCTION PRODUCTS DIRECTIVE

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1. Scope

1.1 This Guidance Paper clarifies issues relating to the application of Article 4(4) of Council Directive 89/106/EEC[1] (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EC[2].

1.2 The Guidance Paper is primarily intended for regulators and enforcement authorities within the European Economic Area (EEA), industry and notified bodies.

1.3 The guidance provided in this document can only be provisional, until experience is gained with the application of Article 4(4) in practice. The Commission, with the assistance of the Advisory Group of Notified Bodies, will monitor the use of Article 4(4) by industry, keep the Member States informed and ensure that this guidance is reviewed as necessary.

2. Introduction

2.1 Article 4(4) of the CPD states :

> "*Where a manufacturer, or his agent, established in the Community, has not applied, or has applied only in part, the existing technical specifications referred to in paragraph 2, which require, according to the criteria set out in Article 13(4), the product to be submitted for a declaration of conformity as defined in Annex III(2)(ii), second and third possibilities, the corresponding decisions under Article 13(4) and Annex III shall apply and such a product's fitness for use within the meaning of Article 2(1) shall be established in accordance with the procedure set out in Annex III(2)(ii), second possibility.*"

2.2 In other words, two conditions have to be fulfilled before this article can be called upon – a technical specification whose scope covers the product and intended use in question must be in application and the system of attestation of conformity applicable to the product for the given intended use must be either system 3 or system 4 [3].

2.3 If, under these conditions, a producer chooses not to apply the technical specification, or to apply it only in part, then the fitness for use of the product shall be established under system 3 (i.e. declaration of conformity of the product by the manufacturer on the basis of initial type testing of the product by an approved laboratory and factory production control).

2.4 Note, however, that it is not intended that the approved laboratory deliver a favourable technical assessment of the fitness for use of a product for an intended use (that would be an ETA). Neither is the article generally intended to apply to products that differ significantly from harmonised standards, as, according to article 8(2)(b) of the CPD, ETAs may be granted for such products.

3. Applicability of Article 4(4)

3.1 Article 4(4) can be regarded as an instrument of flexibility within the CPD, ensuring that innovation is not stifled by the need to wait for revised technical specifications.

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1 OJ L 40, 11.2.1989

2 OJ L 220, 30.8.1993

3 Note that manufacturers of products that effectively fall under system 4 through the application of Art. 13(5) of the CPD cannot also make use of the provisions of Art. 4(4). The latter specifically limits its applicability to the systems 3 and 4 determined according to the criteria set out in Art. 13(4).

However, whilst it represents a derogation from the requirement to comply fully with a technical specification, it does not lessen the producer's responsibilities with respect to any of the other obligations imposed by the CPD.

3.2 Experience of the use of Article 4(4) is lacking, but there may a number of reasons why a producer might choose not to apply parts (or any) of a technical specification, for example :

- a defined test method(s) cannot properly accommodate a sample of a particular product for reasons of size, shape etc;
- the product is slightly, but not significantly, different from the usual type of product targeted by the specification;
- the provisions on factory production control contained within the specification are not suited to the particular production facility.

3.3 The CPD does not impose any restrictions on the use of Article 4(4), other than those mentioned in Section 1. However, the non-use or partial use of a technical specification will remove the automatic presumption of conformity which that specification confers on the product. The burden of proof regarding those parts of the technical specification not followed will thus be reversed and the producer, in collaboration with the approved laboratory, will have to demonstrate equivalence with its provisions (i.e. the technical specification remains the European reference as regards the required characteristics and performance of the product in question).

4. Notified Bodies

4.1 The CPD does not provide any indication that the approved laboratories involved in the application of Article 4(4) are any different from those involved in a "normal" system 3 evaluation. Member States should therefore ensure that the approved laboratories that they notify to the Commission are also capable of carrying out tasks related to the application of Article 4(4). Member States may limit the scope of notification of an approved laboratory if it is not considered to be capable of carrying out such tasks. [4]

5. Evaluation of fitness for use under Article 4(4)

5.1 Under Article 4(4), the fitness for use of the product shall be established under system 3 (i.e. declaration of conformity of the product by the manufacturer on the basis of initial type testing of the product by an approved laboratory and factory production control).

a) The Initial Type Test

5.2 Under Article 4(4), as for a "normal" system 3 attestation, the responsibilities of the approved laboratory relate only to the Initial Type Test (ITT) of the product [5]. The approved laboratory must, however, first verify that the product under consideration is allowed to be CE marked under the Article 4(4) procedure (see Section 1).

5.3 Provisions relating to the conduct of an ITT should be laid down in each technical specification [6]. Where the producer does not intend to follow these provisions, either at

[4] Further guidance on notification will be provided in a revised version of EC Guidance Paper A. As all Article 4(4) ITTs require a notified body, the possibility of there being no approved laboratories notified for some product families normally under system 4 may also need to be addressed.

[5] References to "approved laboratory" in this paper do not exclude the possibility that more than one laboratory can be involved in carrying out the ITT (as previously agreed by the SCC).

[6] If such rules are not yet provided in the technical specification, the Group of Notified Bodies should provide appropriate common instructions.

all or in part, the approved laboratory has to take on additional responsibility[7]. Essentially, the task of the approved laboratory in cases of deviation is to establish equivalence with respect to the performance of the product in the ITT that would have been obtained by full application of the reference technical specification. The link between the results obtained by the variant assessment methods used and those contained in the technical specification for the same characteristics must therefore be demonstrated.

5.4 The ITT report should therefore include, *inter alia* :

- a description of the product and its intended use and confirmation that the approved laboratory has checked that they both fall within the scope of a technical specification already in application;
- a record of the tests/ procedures/ provisions applied according to the reference technical specification and the results obtained;
- identification of the tests/ procedures/ provisions in the technical specification that have NOT been followed;
- description of the tests/ procedures/ provisions applied to replace those laid down in the technical specification and the results obtained;
- evaluation of the equivalence of the results of the variant tests/ procedures/ provisions applied with respect to those laid down in the technical specification;
- the correspondence between any classes and levels contained in the technical specification and the results obtained from any alternative tests/ procedures/ provisions.

5.5 As the ITT results provide the reference for the performance of the product declared with the CE marking, it is essential that their meaning be readily apparent to all parties. This is particularly the case where test results/ product characteristics are subsequently required as inputs to design calculations.

5.6 ***Note :*** the technical specification will often stipulate that the producer himself may conduct a specific test within the context of the ITT (under system 3). Where this test relates to that part of the technical specification not applied by the producer, the approved laboratory shall take over responsibility for the conduct of the test in question.

b) Other aspects of conformity

5.7 Under Article 4(4), the producer remains fully responsible for the attestation that products are in conformity with the requirements of the CPD. For aspects not related to the performance of the product in the ITT, and for which the technical specification has not been followed, it is therefore the responsibility of the producer to establish equivalence with respect to the reference condition of full application of the technical specification.

5.8 The producer must therefore demonstrate how the variant procedures/ provisions applied can be considered to be equivalent to those laid down in the technical specification.

6. Information to accompany the CE marking

6.1 In cases where the technical specification has been followed only in part, the reference to the technical specification in the information accompanying the CE marking shall be

[7] Note that if the deviation from the technical specification does not have any impact upon the ITT, then the tasks of the approved laboratory under Article 4(4) will not be any different from a normal system 3 ITT.

followed by a clear indication of the clauses not applied. Where the technical specification has not been followed at all, the reference to it in the information accompanying the CE marking shall be followed by the words "not applied" [8].

6.2 Accompanying information relating to the performance of the product (e.g. declared values) must be expressed in terms comparable to those of the reference technical specification, such that enforcement authorities (and users) can relate the performance characteristics of the product to those of similar products complying fully with the technical specification. The equivalence of the product to a fully compliant one must therefore be readily apparent. As the declared values derive directly from the ITT, the approved laboratory should assist the producer in determining what additional information needs to accompany the CE marking.

7. Article 4(4) and European technical approvals (ETAs)

7.1 An ETA is a favourable technical assessment of the fitness for use of a product for an intended use. Thus, it is already a tailor-made technical specification for a particular product and producer [9]. Article 4(4) permits deviations from ETAs (but not ETA Guidelines) under the same conditions as for harmonised European standards, although in this case the producer also has the alternative of approaching the original approval body to issue an amendment to the ETA already granted.

7.2 In respecting the general obligation to apply "good engineering practice", the approved laboratory involved under Article 4(4) must consider the need to consult the approval body that granted the ETA about the deviations proposed by the producer.

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[8] Even though the technical specification has not been applied at all, it still provides the basis upon which the product is to be judged and thus a reference to it should be made with the CE marking.

[9] Note that it is not possible for a producer to use or deviate from an ETA granted to another producer. Each producer has to apply separately for an ETA in his own name.

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

Brussels,
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ENTR/G5 HS

GUIDANCE PAPER J

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

TRANSITIONAL ARRANGEMENTS UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

(Revision Sep 2002)

(originally issued following consultation of the Standing Committee on Construction at the 49th meeting on 28/29 March 2000, as document CONSTRUCT 99/382 Rev.1
Updated April 2001 as CONSTRUCT 01-477 and following consultation of SCC Sep 02)

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TRANSITIONAL ARRANGEMENTS UNDER THE CONSTRUCTION PRODUCTS DIRECTIVE

1. Scope

This Guidance Paper considers the issue of transitional arrangements within the context of the implementation of Council Directive 89/106/EEC[1] (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EC[2].

The Guidance Paper is intended for technical specification writers (CEN/CENELEC and EOTA members), regulators and enforcement authorities within the European Economic Area (EEA), notified bodies and industry.

In the context of this Guidance Paper the term "transitional arrangements" refers to the time period during which national and European technical specifications are both available for use by producers placing their products on the EEA market – the period of co-existence. References to Member States in the document also apply to the EEA EFTA States. References to CEN also apply to CENELEC. References to national provisions apply to laws, regulations and administrative provisions of the Member States.

The guidance provided in this document provides a framework within which the Commission and the Member States will bring into use the technical specifications produced in support of the CPD. All aspects of the system's functioning will be closely monitored by the Commission and the guidance reviewed in the light of experience.

2. Introduction

The main objective of a period of co-existence is to allow producers and notified bodies to adapt gradually to the conformity assessment procedures and the essential requirements set up by a directive. Producers, importers and distributors also need to be given time to exercise any rights they have acquired under the rules predating the entry into force of the new regime (e.g. to sell their stocks of products manufactured in line with the national rules previously in force).

Unlike most other "new approach" directives, the CPD does not have an explicit, dated transition period during which producers have the choice between complying with the directive or with national rules. Instead, transitional arrangements are governed by Article 6(2), which states :

> *"Member States shall, however, allow products not covered by Article 4(2) to be placed on the market in their territory if they satisfy national provisions consistent with the Treaty until the European technical specifications referred to in Chapters II and III provide otherwise."*

The interpretation of this article is that each European technical specification will make provisions for a period of co-existence covering the products falling within its scope. It also follows from Article 6(2) that once this period of co-existence is over for a given technical specification, Member States can no longer allow those products satisfying pre-existing national provisions to continue to be placed on the EEA market. All products falling within the scope of the technical specification must thereafter comply with all of the provisions of the CPD.

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1 OJ L 40, 11.2.1989

2 OJ L 220, 30.8.1993

3. The case of European product standards (hEN)

3.1 Key events/ dates (see Annex 1)

Event	Description	Action
Date of Availability (DAV) of hEN [3]	The date when the definitive text in the official CEN language versions of a ratified hEN is distributed by the CEN/MC. CEN rules require its members to announce the hEN within 3 months and publish (transpose) it within 6 months.	**CEN / NSBs**
Notification of the hEN to the EC	Official notification by CEN, by letter to the EC, that the hEN fulfils the conditions necessary for presumption of conformity with the provisions of Articles 2 and 3 of the CPD. The Commission will inform the Member States.	**CEN / EC**
Publication of the hEN reference in the OJEC	The Commission shall publish the reference of the hEN in the "C" series of the Official Journal of the European Communities.	**EC**
Date of Applicability	The publication notice in the OJEC will include the date of applicability of the standard as an hEN according to article 4(2)a of the Directive 89/106/EEC. This will, by default, be nine months after the DAV of the hEN, unless otherwise agreed by the SCC.	**EC**
Publication of the hEN reference by national authorities	Member States have an obligation to officially publish the reference to the national standard transposing the hEN, although this is not a precondition for the applicability of the standard. The form of publication will be according to national rules.	**MS**
Date of Withdrawal (DOW) of national standards	The latest date by which national standards conflicting with the hEN have to be withdrawn by CEN members. The date shall be stated in the foreword of every definitive hEN and shall be published in the OJEC along with the reference. Member States shall give legal validity to this date in a manner appropriate to their national legal system. This will be , by default, one year after the date of applicability of the hEN, unless otherwise agreed by SCC).	**EC/ CEN / NSBs**
Date of withdrawal of all conflicting national provisions	At the DOW associated with the hEN, Member States have to terminate the validity of all conflicting national provisions allowing products to be placed on the market.	**MS**

3.2 Start of the period of co-existence

Publication of the reference of a hEN in the OJEC signifies that the standard fulfils the conditions necessary for presumption of conformity with the provisions of Articles 2 and 3 of the CPD. Article 4(2)(a) provides that from publication in the OJEC (i.e. the date of applicability noted in the publication), the hEN may be used as the basis for the CE marking of construction products falling within its scope, provided that it has already been transposed by at least one EU CEN member[4]. Article 6(1) obliges Member States not to impede the free movement, placing on the market or use in their territory of products which satisfy the

[3] This may refer to a single product standard or a coherent package of related product standards. Note that all of the supporting standards needed to apply an hEN must also be available before the co-existence period can begin.

[4] Since a European standard has to be transposed in a uniform way by the NSBs, a manufacturer may choose any of the national standards transposing it.

provisions of the CPD. These two articles together thus provide the legal basis for the commencement of the period of co-existence for the hEN in question.

Member States have an obligation to officially publish the reference to the national standard transposing the hEN (Article 4.2.a), although this is not a precondition for the standard to be used for the purposes of CE marking. In principle, the obligation on Member States to publish this reference arises as soon as the hEN becomes applicable. Failure to publish would constitute an infringement of European law, unless a procedure is initiated against the standard under the safeguard clause (Article 5.1). Assuming the latter is not the case, Member States' national provisions must also have been adapted/ approximated to provide for the use of hENs and CE marked products in parallel with products complying with the existing national provisions.

As the transposition of the CPD in the Member States will have already established the framework for the acceptance and use of CE marked products, only product-specific provisions will need to be adapted/ approximated (e.g. to establish what the CE marked product is equivalent to in the existing provisions). This activity will include the specification of any classes and levels of performance that are to be observed on the national territory for given intended uses of the products (see EC Guidance Paper E for more information on classes and levels). Such changes to national provisions do not have to be notified to the Commission under the procedure established by Directive 98/34/EC[5], unless there is a change in the level of requirement involved. They do, however, have to be communicated to the Commission (Article 22.2 of the CPD).

In order to overcome any practical problems associated with different dates of transposition and publication in the Member States, it is proposed that the publication of the reference to the hEN in the OJEC shall establish the date of applicability of the hEN, which, by default, will be nine months after the Date of Availability of the standard. In specific cases, this period may be shortened or lengthened, if such a change can be justified[6] (the SCC will be consulted on a case by case basis). This delay in the date of applicability will provide time for the Member States to adapt/ approximate their national provisions and confirm the notification of approved bodies. It will also enable producers to start the process leading to CE marking, if they so wish. Figure 1 gives an example of a notification for the OJEC.

Figure 1: Example of the notification in the OJEC

[5] OJ L 204, 21.07.1998

[6] The necessary changes in national provisions will vary according to the type of product involved and the national legal framework. Changes in provisions for products may also necessitate modifications to related provisions on the design and execution of works (e.g. design codes, workmanship standards etc).

ESO*	Reference	Title of the standard	Date of Applicability of the standard as a harmonised European standard according to article 4.2.a of Directive 89/106/EEC.	Date of the end of the co-existence period**
CEN	EN 197-1	Cement – Part 1: Composition, specifications and conformity criteria for common cements	1 April 2001	1 April 2002

(*) ESO: (European standardisation organisation):

– CEN: Rue de Stassart/Stassartstraat 36, B-1050 Brussels, tel. (32-2) 550 08 11, fax (32-2) 550 08 19 (www.cenorm.be);

– Cenelec: Rue de Stassart/Stassartstraat 36, B-1050 Brussels, tel. (32-2) 519 68 71, fax (32-2) 519 69 19 (www.cenelec.be);

– ETSI: BP 152, F-06561 Valbonne Cedex, tel. (33-4) 92 94 42 12, fax (33-4) 93 65 47 16 (www.etsi.org).

(**) The date of the end of the co-existence period is the same as the date of withdrawal of conflicting national technical specifications, after which presumption of conformity must be based upon harmonised European specifications. (harmonised standards or European Technical Approval).

During the period of co-existence, which will thus start on the date of applicability established in the publication in the OJEC, producers are free to choose whether to continue to apply the existing national systems, or to affix the CE marking according to the CPD (or both if the market situation so requires)[7]. Member States must permit products satisfying either set of provisions to be placed on the market and used on their territory [8]. Refusal to accept CE marked products onto the national market would constitute an infringement of European law, unless a safeguard procedure is initiated against the hEN (Article 5.1) or against the product itself (Article 21).

It follows that Member States are obliged to maintain their existing national systems as an option for producers until the end of the period of co-existence (Article 6.2 uses the word "*shall*"). The national standards bodies should also continue to make available copies of national standards applicable under the existing national system, even if they have become obsolete through withdrawal before the Date of Withdrawal specified [9].

During the period of co-existence, Member States should not make changes to the national system in force which would modify product requirements or the conformity assessment procedure or which would otherwise have an effect on acquired rights. If any such changes are made, in accordance with the EC Treaty, they must be notified at the draft stage, as required by Council Directive 98/34/EC, so that the Commission and other Member States may have an opportunity to submit comments on the proposed amendments.

3.3 End of the period of co-existence

[7] Note also that Article 4(4) of the CPD, which addresses the partial or non-use of a hEN by a producer for products whose attestation of conformity falls under system 3 or 4, also comes into play from the start of the period of co-existence. Further guidance on this procedure is being developed.

[8] See also EC Guidance Paper E regarding the use of products in the context of national provisions on works.

[9] Member States may need to take action to ensure that this objective is achieved.

The Date of Withdrawal (DOW) of the national standards conflicting with the hEN marks the end of the period of co-existence for products falling within the scope of the hEN. Whilst CEN rules on the Date of Withdrawal only place an obligation on CEN members, Article 6(2) of the CPD makes use of this date to place a more wide-ranging obligation on the Member States. The Date of Withdrawal shall be stated in the foreword of each definitive hEN[10] and shall be published in the OJEC along with the reference to the harmonised standard. However, the Member States will have to give legal validity to this date on their territory in a manner appropriate to their national legal system. As the Date of Withdrawal effectively determines the conditions under which products may be placed on the EEA market, the legal competence for its determination lies with the Commission, in consultation with the Member States (SCC), rather than with CEN.

It is proposed that the default Date of Withdrawal (i.e. the duration of the period of co-existence) for hENs shall be one year after the date of availability established in the publication of the reference in the OJEC (i.e. normally 21 months after the Date of Availability of the hEN), unless it can be demonstrated to the Commission (e.g. by the CEN TC concerned or the SCC) that this length of time is insufficient for the products in question [11]. In such cases the Commission, after consulting the Member States, will inform CEN of the date to be applied.

Once the period of co-existence has ended, products falling within the scope of the hEN must comply with all of the provisions of the CPD in order to be placed on the EEA market. Products manufactured in line with the pre-existing national provisions may no longer be placed on the EEA market (Article 6.2). Consequently, products may no longer be manufactured according to national (non-EN) standards, national technical approvals, or other type approvals or certificates issued under the previous system (except for use outside the EEA). ***Note :*** the validity of a pre-existing national approval or certificate is thus terminated at the end of the period of co-existence, whatever its original lifetime (legal basis : Art. 6.2 of the CPD). However, given the nature of the construction industry, with sometimes long project lead times, this principle should be interpreted with some flexibility by the Member States.

It follows that the Member States have to take action to terminate the validity of the national system previously in force for the placing on the market of the products in question (e.g. to repeal the relevant national laws, regulations and administrative provisions). As a result, the national measures implementing the CPD and the hEN will be the only mandatory rules in force for the products concerned in every Member State.

However, as the CPD does not have specific provisions regarding the "putting into service" of construction products, national rules apply to the case of products already placed on the EEA market under the old system prior to the end of the period of co-existence. Member States may authorise the continued use of such products for a reasonable period of time. Of course, this only applies to individual products and not to product types or ranges.

The Commission will track the implementation of the harmonised standards in all Member States using the CPD scoreboard, published on the internet. http://europa.eu.int/comm/enterprise/construction/internal/score/scorehome.htm

[10] If this is missing, for whatever reason, then other provisions will have to be made.

[11] Note that an extended period of co-existence could place local producers, complying with a less onerous national standard, in an advantageous position with respect to competitors complying with the European standard. However, there may be sound technical and/or economic arguments for a longer period of co-existence (e.g. capacity of the notified bodies, time required for re-testing, product adaptation etc).

Summary : Harmonised European product standards – see Annex 1

Start of co-existence period **(Date of Applicability)**	***The co-existence period will begin on the Date of Applicability as given in the published reference to the hEN in the OJEC.*** Producers may now affix the CE marking. By this time, MSs must therefore be in a position to accept the placing on the market and use of CE marked products alongside those produced according to pre-existing national provisions (e.g. official publication of the reference to transposed hEN, adaptation of national provisions etc).
During co-existence period	MS must accept the placing on the market and use of CE marked products alongside products conforming with pre-existing national provisions. Producers have a free choice to apply the European and/ or national systems.
End of co-existence period	***Date of Withdrawal of conflicting national standards.*** End of validity of the pre-existing national provisions. Products placed on the EEA market must comply with all of the provisions of the CPD. Products manufactured in line with the previous national systems in force may no longer be placed on the EEA market.

4. The case of European technical approvals (ETA) with guideline (ETAG)

4.1 Preamble

Although an ETAG is not a technical specification as defined by the CPD (hENs and ETAs only), it does have the character of a "*technical specification*" as defined by Directive 98/34/EC laying down a procedure for the provision of information in the field of technical standards and regulations – "*a specification contained in a document which lays down the characteristics required of a product such as levels of quality, performance, safety or dimensions, including the requirements applicable to the product as regards the name under which the product is sold, terminology, symbols, testing and test methods, packaging, marking or labelling and conformity assessment procedures.*".

An ETAG serves as the basis for the delivery of ETAs, which themselves have to fulfil the conditions necessary for presumption of conformity with the provisions of Articles 2 and 3 of the CPD. As such, an ETAG can be considered to be an instrument for the European harmonisation/ approximation of requirements on construction products. The maintenance of conflicting national requirements is therefore incompatible with EC law and they must be withdrawn within a reasonable period of time.

For the sole purposes of Article 6(2) of the CPD, the ETAG will therefore be accorded the status of a technical specification[12]. In principle, then, the treatment of ETAGs should be analogous to that of harmonised European standards – Member States need time to adapt their national provisions to accept CE marked products and producers need a period of co-existence to prepare for the ultimate withdrawal of conflicting national provisions.

4.2 Key events/ dates (see Annex 2)

Event	Description	Action
Date of availability of ETAG	The date when the definitive text of the ETAG in English is distributed by the Commission to the Member States, with a covering letter of notification. The ETAG officially exists from this date.	**EOTA / EC**
Publication of the ETAG in Member States	Member States have an obligation to publish the ETAG, although this is not a precondition for its applicability on the European market. The form of publication will be according to national rules. (*A common date, stated in each ETAG, will be assumed for the purposes of transition. Proposal : by default nine months after the availability of the ETAG, unless otherwise agreed).*	**MS**
Date of withdrawal of conflicting national provisions	A common date to be stated in each ETAG. *(Proposal : by default two years after the start of the co-existence period, unless otherwise agreed).*	**MS**

4.3 Start of the period of co-existence

[12] This interpretation will allow orderly transitional arrangements to be established in relation to ETAGs, but certainly does not imply that ETAGs can be used as technical specifications generally, (e.g.) as a direct basis for the CE marking of construction products.

Once an ETAG has been notified to the Member States by the Commission, by letter, a producer may request an ETA from one of the notified approval bodies, although there is not yet any obligation to do so. In principle, the CE marking of products with an ETA is also possible at this time, but Member States have to be given time to adapt/ approximate their national provisions and confirm the notification of approved bodies for attestation of conformity purposes.

As no time period for publication is specified in the CPD, the obligation to publish arises immediately upon receipt of the EC letter. However, the Commission will afford the Member States a reasonable period within which to act. To prevent possible market distortions arising from different dates of publication across Europe, it is reasonable to fix a date by which a given ETAG must be published. This date shall be set by the Commission in consultation with the SCC prior to the ETAG being formally adopted. A default date of nine months has been taken as a base. The agreed date shall appear in the definitive version of the ETAG notified to the Member States by the Commission[13]. Failure to publish the ETAG by a Member State would constitute an infringement of European law. The Commission has the intention to publish the co-existence periods for ETAGs in the OJEC, in the same way as for harmonised product standards, see figure 2.

The period of co-existence will therefore start on the date specified in the ETAG, rather than on its date of availability, as long as all of the required supporting documents (test methods etc) are also available. By this time, the Member States' national provisions must have been adapted/ approximated to provide for the use of ETAs and CE marked products in parallel with products complying with the existing national provisions (see chapter on hENs for more detail). Producers may seek an ETA on the basis of the ETAG and carry out the procedures leading to CE marking before the start of the period of co-existence.

During the period of co-existence producers are free to choose whether to continue to apply the existing national systems or to affix the CE marking according to the CPD. Member States must permit products satisfying either set of provisions to be placed on the market and used on their territory. Refusal to accept CE marked products onto the national market would constitute an infringement of European law, unless a safeguard procedure is initiated against the ETA (Article 5.1) or against the product itself (Article 21). National technical approvals, or similar instruments, may continue to be issued right up until the end of the period of co-existence, although their validity will necessarily be limited in time (i.e. only until the end of the period of co-existence).

Figure 2: Example of the notification for ETAGs in the OJEC

EOTA(1) Reference	Title of the ETA Guideline	Date of Applicability (2)	Date of the end of the co-existence

[13] If this is missing, for whatever reason, then other provisions will have to be made.

			period ([3])
ETAG 001 - 1	Metal Anchors for use in Concrete Part 1: Anchors in general	31.07.2000	31.07.2002
ETAG 001 - 2	Metal Anchors for use in Concrete Part 2: Torque-controlled expansion anchors	31.07.2000	31.07.2002
ETAG 001 - 3	Metal Anchors for use in Concrete Part 3: Undercut anchors	31.07.2000	31.07.2002
ETAG 001 - 4	Metal Anchors for use in Concrete Part 4: Bonded Deformation-controlled expansion anchors	31.07.2000	31.07.2002

([1]) EOTA: European Organisation for Technical Approvals:
Avenue des Arts 40 Kunstlaan, B - 1040 Brussels Tel.: +32 (0)2 502.69.00; Fax: +32 (0)2 502.38.14 E-Mail: info@eota.be (www.eota.be)
([2]) Date of Applicability of the ETA Guideline as a harmonised European Specification according to article 4(2)(b) of Directive 89/106/EEC.
([3]) The date of the end of the co-existence period is the same as the date of withdrawal of conflicting national technical specifications, after which presumption of conformity must be based upon harmonised European specifications. (harmonised standards or European Technical Approvals).
The translations of the titles given above have been provided by EOTA and represent the "official" language versions given by the National members of EOTA.

4.3 End of the period of co-existence

Article 6(2) requires that the technical specifications provide for a period of co-existence. On the basis of the above arguments, this concept can be extended to ETAGs. Thus, each ETAG shall specify the date of withdrawal of conflicting national provisions [13]. However, the Member States will have to give legal validity to this date on their territory in a manner appropriate to their national legal system. As this date of withdrawal effectively determines the conditions under which products may be placed on the EEA market, the legal competence for its determination lies with the Commission, in consultation with the Member States (SCC), rather than with EOTA.

The default date of withdrawal (i.e. the length of the period of co-existence) for each ETAG shall be two years after the start of the period of co-existence (i.e. 33 months after the date of availability of the ETAG), unless it can be demonstrated to the Commission (e.g. by the EOTA WG concerned or the SCC) that this length of time is insufficient for the products in question. In such cases the Commission, after consulting the Member States, will inform EOTA of the date to be applied.

Once the period of co-existence has ended, products falling within the scope of the ETAG must comply with all of the provisions of the CPD in order to be placed on the EEA market[14]. Products manufactured in line with the pre-existing national provisions may no longer be placed on the EEA market (Article 6.2). Consequently, products may no longer be manufactured according to national (non-EN) standards, national technical approvals, or other type approvals or certificates issued under the previous system (except for use outside the EEA). *(see also paragraph 3.10)*

It follows that the Member States have to take action to terminate the validity of the national system previously in force for the placing on the market of the products in question (e.g. to repeal the relevant national laws, regulations and administrative provisions). As a result, the national measures implementing the CPD and the ETAG will be the only mandatory rules in force for the products concerned in every Member State.

[14] Note that if the ETAG concerns kits, then the kit is the product referred to here. Components of the kit may still be placed on the market according to national provisions unless they themselves are covered by a technical specification for which the period of co-existence has ended.

However, as the CPD does not have specific provisions regarding the "putting into service" of construction products, national rules apply to the case of products already placed on the EEA market under the old system prior to the end of the period of co-existence. Member States may authorise the continued use of such products for a reasonable period of time. Of course, this dispensation only applies to individual products and not product types or ranges.

The Commission will track the implementation of the ETAGs in all Member States using the CPD scoreboard, published on the internet. http://europa.eu.int/comm/enterprise/construction/internal/score/scorehome.htm

Summary : European technical approvals with guideline -see Annex 2

Start of co-existence period	***Common date to be fixed in the ETAG.*** Producers may now affix the CE marking on the basis of an ETA granted in accordance with the ETAG. By this time, MSs must therefore be in a position to accept the placing on the market and use of CE marked products alongside those produced according to pre-existing national provisions (e.g. official publication of the ETAG, adaptation of national provisions etc).
During co-existence period	MS must accept the placing on the market and use of CE marked products alongside products conforming with pre-existing national provisions. Producers have a free choice to apply the European and/ or national systems.
End of co-existence period	***Date of withdrawal of conflicting national provisions (fixed in ETAG).*** End of validity of the pre-existing national provisions. Products placed on the EEA market must comply with all of the provisions of the CPD. Products manufactured in line with the previous national systems in force may no longer be placed on the EEA market.

5. The case of European technical approvals without guideline

European technical approvals granted according to the procedure laid down in Article 9(2) of the CPD apply to one manufacturer for one product type and do not impose any specific obligations on other producers. The producer applying for an ETA via this route is effectively voluntarily moving to the European system.

Due to the individuality of products using this route to CE marking, it is not envisaged to specify transitional arrangements for these cases, unless a particular problem is identified by the Member States or EOTA. If the need for an ETA Guideline or European standard is subsequently identified, then the relevant transitional arrangements identified above will apply.

Member States have the same obligations regarding their acceptance of the placing on the market and use of these CE marked products as for products following any other route to CE marking (see sections 3 and 4).

6. The case of products not covered by European technical specifications

National provisions apply (Art. 6.2). CE marking is not permitted for such products. The CPD does not impose any obligation on producers to request an ETA within a specific time period.

7. The case of harmonised European fire standards and classification systems

7.1 Preamble

The existence of national fire classification systems represents a technical barrier to trade, irrespective of whether European product specifications are available or not. Once a legal instrument for European harmonisation/ approximation exists, the maintenance of conflicting national systems is incompatible with EC law. The national fire classification systems will therefore have to be withdrawn within a reasonable period of time. This applies not only to construction products, but also to construction works or parts thereof, where the requirements also have an influence on the Internal Market (e.g. resistance to fire for assemblies not covered by product specifications). However, it should be noted that the final withdrawal of the national fire classification systems is not governed by Article 6(2) of the CPD, as complete European product specifications are not involved.

The fire classification systems for reaction to fire[15] and resistance to fire[16] are now available and in the coming months several European product specifications will be ready and waiting to make use of them. The classification systems must therefore be brought into use as soon as possible for products covered by such technical specifications. For other products, producers should also be given the option of using the Euro-classifications at the earliest practical opportunity.

The final withdrawal of national systems should normally only occur once a significant proportion of European product specifications have been delivered and their co-existence periods ended. Nevertheless, to eliminate the problems associated with the maintenance of two parallel systems, it would be in the interests of Member States to definitively adopt the European classification systems as the sole national system at an earlier date. This would also serve to remove technical barriers to trade, in line with Articles 28/30 of the EC Treaty.

7.2 Key events/ dates

Event	Description	Action
Date of Availability of fire classification EN package (fEN)[17]	The date when the definitive text in the official CEN language versions of a ratified fEN is distributed by the CEN/MC. CEN rules require its members to announce the fEN within 3 months and publish (transpose) it within 6 months.	**CEN / NSBs**
Publication of the EC Decision in the OJEC	The Commission shall publish the Decisions establishing the European classification systems in the "L" series of the Official	**EC**

15 Commission Decision 2000/147/EC: Commission decision of 8th February 2000 implementing Council Directive 89/106/EEC as regards the classification of the reaction to fire performance of construction products.

16 Commission Decision 2000/367/EC: Commission decision of 3rd May 2000 implementing Council Directive 89/106/EEC as regards the classification of the resistance to fire performance of construction products, construction works and parts thereof.

17 Classification EN and all supporting fire test ENs. Note that the obligations on CEN members arise for each individual EN, but this section considers the fEN package as a whole.

	Journal of the European Communities.	
Entry into force of the EC Decision	This occurs upon notification of the Decision to those to whom it is addressed (the Member States). However, the Decision will not be applicable until the European fire standards necessary to implement it have been made available.	**EC/ MS**
Date of Withdrawal of national standards	The latest date by which national standards conflicting with the fEN have to be withdrawn by CEN members. The date shall be stated in the foreword of every definitive fEN. Withdrawal dates for the classification EN and related test ENs should coincide wherever possible.	**CEN / NSBs**
Withdrawal of conflicting national classification systems	A date to be determined by the Commission in consultation with the Member States. May be different for reaction and resistance to fire.	**EC / MS**

7.3 Start of the period of co-existence

Once the relevant Commission Decision has been notified to the Member States[18] and entered into force, a European classification system becomes operational with the availability of the complete package of European fire standards necessary to implement it (i.e. the classification standard and related test methods). After this time, Member States have an obligation to accept onto their market CE marked products that incorporate a Euro-classification for one or more fire characteristics. In addition, they must not impede the use of such products (Article 6.1).

The period of co-existence therefore effectively starts on the Date of Availability of the final European standard of the package required to implement a given Decision[19]. By this time, Member States' national provisions must have been adapted to provide for the use of CE marked products with European fire classifications in parallel with products complying with existing national provisions.

For products not covered by European technical specifications (hENs and ETAs) for which the associated period of co-existence has ended (see chapters 3 and 4), producers may also choose to apply and use the European fire classification systems independently. However, where the European fEN package does not provide sufficient information for a product to be correctly classified (e.g. because detailed mounting and fixing instructions are to be provided in a European product specification), then it will not be possible to use the European system, for regulatory purposes, until that information is available in a legally acceptable form.

In principle, the EC Treaty obliges Member States to accept the use of the European classification systems in place of the existing national systems, even in the absence of CE marking. Member States must therefore make provision for the parallel use of European and national classifications for all products within a reasonable period of time.

When a producer chooses to use the European classification system, a Member State may not request an additional national classification for the same end-use application. Conversely,

[18] Note that publication of the Decision in the OJEC is not obligatory (EC Treaty), but is normally done shortly after its notification.

[19] Since European standards have to be transposed in a uniform way and neither the CPD or the classification Decisions refer to transposed standards, it is not necessary for the fEN package to have been transposed into corresponding national standards.

during the period of co-existence for fire classification systems, a producer cannot be obliged to supply a European classification, except for CE marking purposes.

7.4 CE marking requirements

Once the co-existence period for the Euro-classification systems has started, the CE marking of construction products with a fire-related requirement becomes possible, but not compulsory, once the co-existence period for the corresponding European product specification has also begun. For the purposes of CE marking, use of the European classes is obligatory.

Once the period of co-existence associated with the European product specification in question has ended, use of the European classes becomes obligatory for CE marking products falling within its scope (assuming that the characteristic is relevant for the product in question). The continued use of national tests and classifications will thus no longer be permitted for such products placed on the EEA market (i.e. in these cases, the end of the transitional arrangements for fire testing and classification is governed by the ending of the co-existence period associated with the European product specification). Until the end of the co-existence period laid down for the product specification, producers will have a choice to continue to use the national system, whether or not the conflicting national standards have become obsolete through withdrawal.

7.5 Withdrawal of national fire standards

The Date of Withdrawal of national fire standards conflicting with the European standards is governed by CEN rules. The minimum period allowed after the date of availability of the EN is 6 months, whilst the maximum should not normally exceed 3 years.

However, the withdrawal of conflicting national test standards is not a determining step in the implementation of the European fire classification systems [20]. The periods of co-existence will be governed by CE marking obligations and the final withdrawal of national classification systems rather than the withdrawal of national fire test standards. To fulfil the objectives of any transitional period, Member States should maintain the existing national systems throughout the period, even if this means making reference to national standards that have become obsolete through prior withdrawal [21]. Fire test certificates according to the national systems may therefore remain valid until either an obligation to CE mark a product arises or the final date of withdrawal of national classification systems has been reached (see below). Testing to national systems may also be permitted until the same time.

The fixing of the Dates of Withdrawal for the fENs is a matter for CEN, in consultation with the Commission and the Member States. The agreed dates will be stated in the foreword of every definitive fEN. For practical reasons the dates of withdrawal associated with a classification package should be co-ordinated.

[20] In any case, it is not always clear if a national standard can be considered to be conflicting if it concerns a different test method to the European one – e.g. reaction to fire tests. They may also be required for non-construction products.

[21] National Standards Bodies may withdraw the conflicting standards at any time up until the Date of Withdrawal, but this does not prevent Member States from maintaining references to these standards.

7.6 End of the period of co-existence [22]

The final date of withdrawal of the national fire classification systems will be determined by the Commission in consultation with the Member States, taking account of the needs and concerns of industry. The time to withdrawal should normally be sufficiently long so that a large proportion of European product specifications have been delivered and their periods of co-existence ended (i.e. the use of the Euro-classification systems will anyway be required for the majority of construction products). However, if most Member States have already voluntarily moved definitively to the European system, then this time could be shortened (see para 7.3).

It is proposed that the definitive date by which the *national classification systems* shall be fully withdrawn be reviewed in the future in the light of progress with technical harmonisation for construction products. Current indications are that a period of between 5 and 10 years from the entry into use of the corresponding European classification systems will be required before such a withdrawal could be contemplated.

From the agreed date, the existing national provisions relating to fire testing and classification for construction products or works will have to be repealed. Only the European classification systems will be valid in the EEA, whether or not all of the European product specifications have been delivered by this time. For products/ elements not covered by harmonised technical specifications, the national provisions in force will have to be amended to refer to the EC classification system and associated test methods[23].

Summary : European fire classification systems

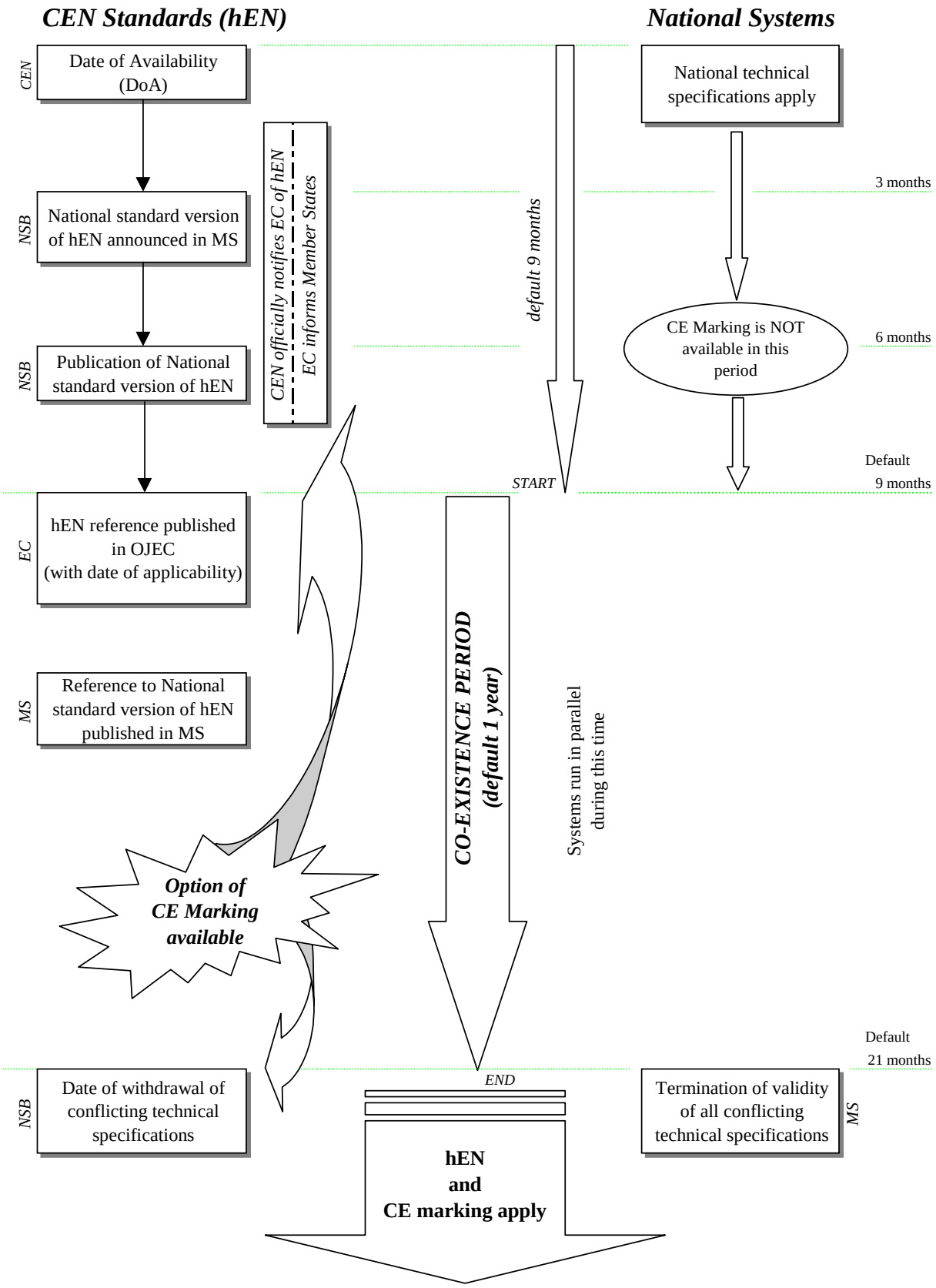
Start of co-existence period	***Date of availability of the whole EN classification package, assuming that the corresponding Decision has entered into force.*** Member States' regulations must have been adapted to make provision for the use of CE marked products with European fire classifications in parallel with products complying with the existing national provisions. Member States should also have adapted their legislation to permit all producers to make use of the Euro-classification alongside the existing national system. Producers may now affix CE marking, if the product technical specification is also in application. Producers may choose whether to use the European and/ or national fire classification systems, except for the purposes of CE marking.
During co-existence period	MS must accept the use of either the European or existing national classification systems. Producers have a free choice of which system to apply, except for the purposes of CE marking.

[22] Note that this refers only to construction products for which there is not already an obligation to use the European classification systems as a result of the ending of the co-existence period for the product technical specification.

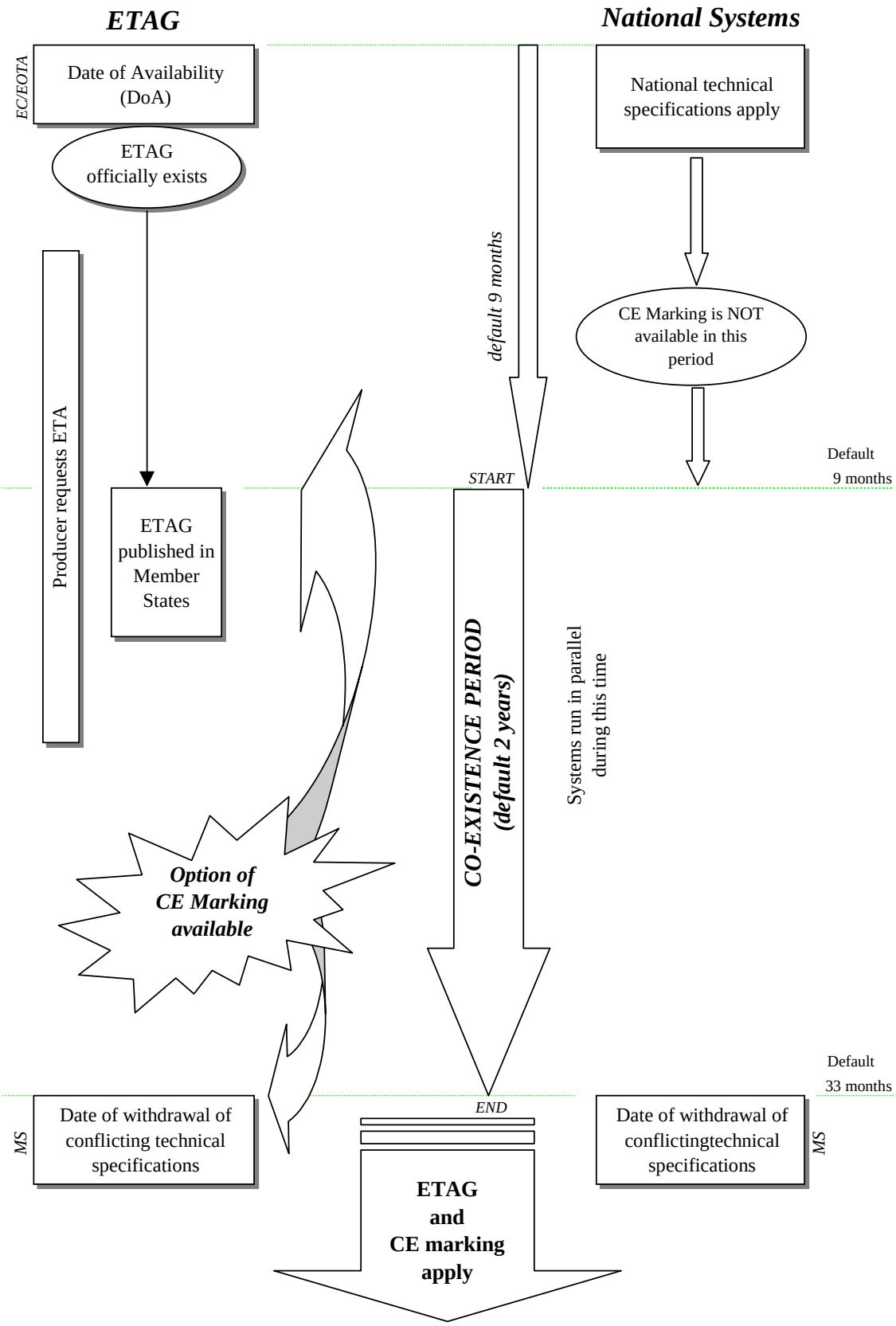
[23] Note that national classification systems may remain in force for products not falling within the scope of the CPD (e.g. curtains and drapes in the case of reaction to fire).

End of co-existence period	***Date of withdrawal of conflicting national classification systems.*** MS must terminate use of the existing national system. Products placed on the EEA market must from now on have a Euro-classification (if required). (N.B. for CE marking purposes, the end of the period of co-existence of fire classifications is more likely to be governed by the product technical specification).

ANNEX 1 : TRANSITIONAL ARRANGEMENTS
Harmonised product standards



ANNEX 2 : TRANSITIONAL ARRANGEMENTS
ETAG



EUROPEAN COMMISSION
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL

Single Market : regulatory environment, standardisation and New Approach
Construction

December 2004

GUIDANCE PAPER K

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

THE ATTESTATION OF CONFORMITY SYSTEMS AND THE ROLE AND TASKS OF THE NOTIFIED BODIES IN THE FIELD OF THE CONSTRUCTION PRODUCTS DIRECTIVE

Preface

Article 20 of the Construction Products Directive (89/106/EC) 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

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GUIDANCE PAPER K

THE ATTESTATION OF CONFORMITY SYSTEMS AND THE ROLE AND TASKS OF THE NOTIFIED BODIES IN THE FIELD OF THE CONSTRUCTION PRODUCTS DIRECTIVE

- This Guidance Paper was originally issued following consultation with the Standing Committee on Construction at the 50th meeting on 5 July 2000, as document CONSTRUCT 00/421.

- It was updated following consultation with the SCC in September 2002.

- It has been revised (in particular addition of Annex 3 concerning specific aspects of the attestation of conformity with regard to performance characteristics determined by calculation) after consultation with the Standing Committee at the 60th meeting, on 26 October 2004, as document Construct 04/646.

Acronyms used in this Guidance Paper

AB:	Approval Bodies (Bodies authorised by the Members States according to Article 10 of the CPD to issue European Technical Approvals)
AoC:	Attestation of conformity according to Chapter V in conjunction with Annex III of the CPD
CEN:	European Committee of Standardisation (Comité Européen de Normalisation)
CEN/TC:	Technical Committee of CEN
CENELEC:	European Committee for Electrotechnical Standardization (Comité Européen de Normalisation de l'Electricité)
CPD:	Council Directive 89/106/EEC (Construction Products Directive)
CUAP	Common Understanding of Assessment Procedure for European Technical Approval without guideline (art. 9.2 of the CPD)
EC:	European Commission Services
EEA:	European Economic Area
EOTA:	European Organisation for Technical Approvals
ETA:	European Technical Approval (CPD Chapter III type of "technical specification")
ETAG:	Guideline for European Technical Approval
FPC:	Factory Production Control
GNB:	Group of Notified Bodies
GP L:	Guidance Paper L issued by the Construction Unit of the European Commission "Application and use of Eurocodes"
hEN:	harmonised European Standard (CPD Chapter II type of "technical specification")
ITC:	Initial Type Calculation
ITT:	Initial Type Testing
NB:	Notified Body (also called "Conformity Assessment Body" under other New Approach Directives), which have been designated by Members States for tasks to be carried out for the purpose of conformity assessment). According to the CPD, Notified Bodies include *certification bodies*, *inspection bodies* and *testing laboratories*,
NPD:	No Performance Determined

THE ATTESTATION OF CONFORMITY SYSTEMS AND THE ROLE AND TASKS OF THE NOTIFIED BODIES IN THE FIELD OF THE CONSTRUCTION PRODUCTS DIRECTIVE

1. Scope

1.1 This Guidance Paper goes into detail on the various attestation of conformity (AoC) systems within the context of the implementation of Council Directive 89/106/EEC (hereafter referred to as the Construction Products Directive or CPD), as amended by Council Directive 93/68/EEC.

1.2 It also addresses the relation between the AoC systems and the Notified Bodies. It clarifies the role of the relevant Notified Body/Bodies under the different AoC systems.

1.3 The Guidance Paper refers, in particular, to Articles 13 and 18 and to Annex III of the CPD. The full text of these provisions can be found on http://europa.eu.int/comm/enterprise/construction/index.htm.

1.4 The Guidance Paper is intended for a number of different audiences, particularly Notified Bodies and Regulators and enforcement authorities within the European Economic Area (EEA). It is also of interest to technical specification writers (CEN/CENELEC and EOTA members), for consideration together with the respective mandates, manufacturers and other users for information purposes.

1.5 This document gives information which complements Guidance Paper A[1] because it describes the practical role of the notified bodies. It does not specify the criteria to be used by Member States to examine bodies wishing to be considered for notification (covered by Guidance Paper A).

2. Underlying Principles

2.1 The CPD identifies a complete set of attestation of conformity systems including all the actors with their respective roles and tasks. Voluntary European or international standards[2], or documents produced on a horizontal level[3] for new or global approach directives, describing practices similar to those under the CPD, can be used as a starting point where appropriate but are not obligatory.

2.2 This document is limited to aspects relating to CE marking under the Construction Products Directive. Voluntary aspects that might be addressed in the technical specifications are not dealt with.

2.3 The producer is fully responsible for the attestation that products are in conformity with the requirements of a technical specification. The involvement of a third party, even to

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[1] Guidance Paper A: THE DESIGNATION OF NOTIFIED BODIES IN THE FIELD OF THE CONSTRUCTION PRODUCTS DIRECTIVE

[2] such as EN 45000 series, EN ISO 17025 or EN ISO 9001

[3] CERTIF series, including Guide to the Implementation of Directives based on the New Approach and the Global Approach (2000 edition)

provide an EC certificate of conformity, does not relieve the producer of any of his obligations. However, under the CPD, responsibility for specific actions is given to a third party for all systems of attestation of conformity (AoC) except system 4.

2.4 Whether or not there is third party intervention in attestation of conformity, all of the tests and procedures required by the CPD and the technical specifications must be performed and documented correctly. The documentation needs to be available for notifying authorities and surveillance authorities where relevant.

2.5 In specifying the systems of AoC it has been recognised that the importance of the part played by a product with respect to the essential requirements will not usually be the same for each ER. Thus, within a given system of AoC certain tests of a product's performance have usually been allocated to the notified bodies and the rest to the producer. Details of this allocation of tests need to be specified in the technical specifications, elaborated on the basis of mandates from the Commission.

2.6 In addition, many Commission Decisions relating to the attestation of conformity of construction products are based on a cumulative procedure, in which different systems of AoC are allocated to the various possible intended uses[4] of a product. The type of notified bodies involved, if any, therefore depends upon the range of intended uses that the producer chooses to make his product available for.

2.7 The term "Notified Body" is used only for organisations notified under article 18 of the CPD to avoid confusion with the terminology used for organisations designated by member states under article 10 of the CPD (ie EOTA Approval Bodies).

3. Methods of control of conformity

3.1 Initial type-testing (ITT) of the product (by the manufacturer or a notified body) applicable to all AoC systems

(1) An Initial Type test is the complete set of tests or other procedures described in the harmonised technical specification, determining the performance of samples of products representative of the product type.

(2) An ITT verifies that a product complies with the harmonised technical specification. It defines the performance of all harmonised characteristics to be declared.

(3) Depending on the limitations of intended uses chosen by, and the specific markets envisaged by the manufacturer, the scope of the ITT could be limited to those applicable to the uses foreseen.

(4) A product range may cover several versions of the product, provided that the differences between the versions do not affect the level of safety and the other requirements concerning the performance of the product.

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[4] 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.

(5) An initial type test (ITT) is not an assessment of the fitness for use of a product. The ITT is rather a determination of the performance of a product, on the basis of tests or other procedures described in the technical specifications.

(6) The ITT is only one element which determines whether or not a product can be attested to be in conformity with a technical specification. However, the ITT does play a fundamental role under the CPD as it provides the reference for the declared performance of the product.

3.2 Audit-testing of samples taken at the factory, on the open market or on a construction site by the manufacturer or an notified body;

(1) Commission Decisions generally limit audit testing by Notified Bodies, under the attestation of conformity procedures, to the premises of the manufacturer or his authorised representative.

(2) A proper "audit-test " assumes that:

- The construction product is tested in accordance with the test methods specified in the technical specification and the initial type test.
- The test results are compared with the declared performances of the product derived from the initial type test.
- A test report is delivered, confirming that the findings are in conformity with the technical specifications, the ITT and FPC provisions.

3.3 Factory production control

(1) In the CPD, factory production control means the permanent internal control of production exercised by the manufacturer. Normally this includes testing by the manufacturer, to assure compliance of the manufactured products with the declared performances of the initial type test.

(2) Further details on factory production control can be found in Guidance Paper B: "The definition of factory production control in technical specifications for construction products."

3.4 Specific aspects of the attestation of conformity with regard to product performances determined by calculation

In some EU countries, building or related regulations stipulate, for certain types of buildings and civil engineering works, in each individual case the structural calculations of the works and/or their parts, or certain other types of calculation, to be verified by engineers approved by the building authorities. This is not a CPD issue and, therefore, this Guidance Paper does not deal with the latter task, but only with the issue of calculation in relation to Attestation of Conformity for CE marked construction products. However, Member State rules relating to the verification of calculations regarding works and/or their parts must provide for this verification taking exclusive account of the declared product performances as stated in the documents accompanying the CE marking. They must not introduce any additional requirements or verification of a

product performance, including for products intended to be used as structural components, other than those defined by the harmonised technical specifications[5].

(1) Where feasible, in particular for construction products, which contribute to the mechanical resistance and stability and/or fire resistance of works (structural components and kits), performance characteristics may be determined by calculation (see Guidance Paper L 3.1.2 first dash and 3.3). Such products are distinguished from those products used for structural elements like masonry units, cement, steel reinforcement, etc., for which the performance characteristics are determined by testing (see Guidance Paper L, 3.1, second dash and 3.2).

(2) The hENs or ETAGs/CUAPs/ETAs need to lay down the methods for determining the performances and to specify all the requirements, including conformity assessment requirements regarding Initial Type Testing (ITT) and Factory Production Control (FPC) in such a way that manufacturers establish and provide the relevant declared performances (values, classes and parameters if relevant) in the information accompanying the CE marking of products (Guidance Paper L 3.3.1).

(3) Regarding performance characteristics of structural components and kits, for which the performance is established using a calculation method, in particular Eurocodes, the declared performance is obtained by using one of the three methods described in the Guidance Paper L, clause 3.3.

(4) CE marking and the accompanying documents for such structural products need to provide all of the information necessary to use the product in works, or to integrate the performance characteristics into the structural design of works or parts thereof (see GP L 3.3.1).Related product technical specifications need to require this information relevant for the calculation or the design assumptions of the EN Eurocodes to be part of the information accompanying the CE marking.

(5) With regard to structural components and kits, as for any other construction product, the technical specifications applicable to the product must provide for the entire conformity assessment to be performed and documented according to the provisions of the Directive (see clause 2.4 above). Therefore, the technical specifications (hENs or ETAs) need to define the tasks linked to the attestation of conformity of the product, also with regard to calculation.

(6) Since the task of performing conformity assessment by calculation partly requires the availability of proven special technical competence, knowledge and experience in this field, and necessary means and equipment, significantly different from those needed for testing, Member States notifying a body need to indicate, after careful examination, whether conformity assessment by calculation is a task assigned to this approved body (Article 18(3)). They also need to include this availability in their verification according to Annex IV, last paragraph, of the Directive.

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[5] Including no up-grade of the level of Attestation of Conformity fixed in the relevant Commission Decision.

(7) Determination of performance by calculation may not give ground to deviate from the procedure of attestation of conformity, as generally provided for.

(8) Annex 3 is intended to provide to the specification writers for structural components and kits a clarification concerning the specific aspects of the attestation of conformity with regard to performance characteristics which are determined by calculation (see chapter 3.3 of Guidance Paper L). The corresponding requirements should be developed and detailed, when necessary, in the relevant harmonised technical specifications (hENs or ETAs).
Annex 3 deals with attestation of conformity aspects concerning the calculated performance characteristics of structural components and kits relating to essential requirements n° 1 (Mechanical resistance and stability), including such aspects of Essential Requirement n° 4 (Safety in use, which relate to mechanical resistance and stability) and 2 (Safety in case of fire). It could also be used as reference for products performance characteristics related to other essential requirements (e.g. essential requirements n° 5 – acoustic or n°6 – thermal performances) which are determined by calculation; however, in this case, the content of this guidance may need to be adjusted to suit specific aspects of the products and the calculation methods concerned.
Annex 3 refers only to the influence of calculations for the determination of product performance characteristics. It does not deal with the influence of manufacturing quality.

4. Systems of conformity attestation

(1) According to Article 13 of the CPD, the manufacturer, or his authorised representative established in the Community, is responsible for the attestation that products are in conformity with the requirements of a technical specification within the meaning of Article 4. Conformity needs to be established by means of testing and/or other evidence on the basis of the technical specifications in accordance with Annex III where preference is given to the application of two procedures of conformity attestation, namely:

(i) Certification of the conformity of the product by an approved certification body…(on the basis of 2 alternative systems)

(ii) Declaration of conformity of the product by the manufacturer…(on the basis of four alternative systems)

(2) The certification body[6] in procedure (i) has to perform conformity assessment of the product, and in procedure (ii), first possibility, has to do the assessment of the capabilities of the manufacturer to assess ITT and FPC outcomes against the product specifications and, when surveillance is required, periodically review this.

(3) Under procedure (i) and procedure (ii), first possibility, notified bodies (other than the certification body) may work as sub-contractor to the certification body.

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[6] The involvement of the certification body is not intended to relieve any of the responsibilities for the manufacturer but to reassure the users and the authorities that everything is satisfactory.

(4) Under procedure (ii) second possibility, the tests to be carried out in respect of any one Essential Requirement are the responsibility of a notified test laboratory (see 4.2.2 (3) below). However, that laboratory may subcontract specific tests to other laboratories.

(5) To facilitate referencing the various AoC systems in the Commission Decisions on the Attestation of Conformity and in the corresponding mandates, the systems have been given a number. Annex 1 recapitulates this numbering scheme.

4.1 Certification of the conformity of the product by a notified certification body on the basis of different tasks for the manufacturer and notified bodies (CPD Annex III.2(i) (*Systems 1 and 1+*))

(1) Under systems 1 and 1+, responsibility for the certification of the conformity of the product (on the basis of tasks by the producer and the notified body) is given to a third party.

(2) It is normal practice that various parties – producer, certification body, inspection body, laboratory – carry out the individual tasks required to enable product certification to take place. The certification body is responsible for assembling all of the relevant information, verifying that tasks have been carried out according to the technical specification and assessing and certifying the conformity of the product.

(3) Product certification can therefore be considered to be an umbrella activity, making use of information from various sources. Within this overall scheme, the producer has a significant role to play, including the testing of certain product characteristics as part of an initial type test (see paragraph 3.1 above). The allocation of such tests to the producer needs to be indicated in the technical specifications, elaborated on the basis of the mandates from the Commission.

(4) Under systems 1 and 1+, responsibility for product sampling for the ITT, in accordance with the rules laid down in the technical specification, lies with the certification body (often delegated to an inspection body), rather than the producer.

(5) The result of the actions of the notified body under CPD Annex III.2(i) (*Systems 1 and 1+*) is in all cases a product conformity certificate. The only difference between the commonly used terms 'system 1' and 'system 1+' are the methods used by the notified body to assess the product (ie. 1+ includes audit testing).

4.2 Declaration of conformity of the product by the manufacturer (CPD Annex III.2(ii))

(1) Under systems 2, 2+, 3 and 4, the responsibility for product sampling for the ITT test, in accordance with the rules laid down in the technical specification, lies with the manufacturer.

This second system (Annex III of the CPD) distinguishes between three possibilities:

4.1.1 first possibility (Systems 2 and 2+)

(1) The result of the actions of the notified body under this first possibility is in all cases a factory production control certificate. The only difference between the commonly used terms 'system 2' and 'system 2+' are that whereas both 2 and 2+ involve assessment of Factory Production Control, system 2+ also involves surveillance.

(2) The certification of factory production control (FPC) refers to an evaluation of the permanent internal control of production exercised by the producer (to enable achievement of the required product characteristics to be checked). Thus, both initial inspection and continuous surveillance are general activities relating to a particular production facility, in order to demonstrate that the FPC is in conformity with the requirements of the technical specification and the CPD.

(3) Given the general character of FPC certification, there is no one-to-one relationship with the individual product characteristics, even if some aspects of a product's performance may warrant particular attention (to be specified in the technical specifications if this is the case). Hence, the allocation of tasks to the notified body or the producer on the basis of individual product characteristics does not have any practical value. The assessment of FPC concerns all of the elements, requirements and provisions adopted by the producer to fulfil his obligations under the CPD.

(4) Certification of FPC does not involve assessment of the overall conformity of a product with a technical specification – this remains the responsibility of the producer.

4.1.2 second possibility (system 3)

(1) Under system 3, responsibility for the Initial Type Test (ITT) is given to a third party or parties, rather than to the producer. All other responsibilities fall on the producer.

(2) The responsibility for sampling of the products to be tested, in accordance with the rules laid down in the technical specification[7] lies with the producer. The producer has a duty to ensure that the samples are representative of the product to be placed on the market and to keep satisfactory records of this (i.e. as part of his factory production control).

(3) Having responsibility for the ITT does not necessarily mean that the third party (or parties) has to carry out all of the tests required for a given product type. It is quite normal for the producer to carry out some of the

[7] In the absence of sampling rules (and other initial type testing or factory production control details) in the technical specification, the Group of Notified Bodies shall provide appropriate common instructions to producers. These common instructions will be communicated to the SCC for endorsement. Specification writers could use these as basis for future amendments of the specifications.

testing himself. The technical specifications, elaborated on the basis of the mandates from the Commission, will indicate which of the tests on individual product characteristics may be performed by the producer, as opposed to the notified laboratories (reports will always indicate who has performed the test).

(4) For the tests to be carried out by a third party, the producer may address to one or more notified laboratories, but the tests regarding the same Essential Requirement must be carried out by the same laboratory (i.e. no more than 6 notified laboratories, one per Essential Requirement). This allows highly specialised laboratories (e.g. for fire or acoustical testing) to be notified and brought within the Group of Notified Bodies co-ordination process. The producer needs to inform each notified laboratory of the identity of any other notified laboratories used and to keep appropriate records.

(5) It is recalled that also any tests carried out by the manufacturer himself *(or the notified bodies)* must be performed and reported in accordance with the technical specification(s). The test reports need to make reference to the sample identities referred to above.

(6) The complete ITT Report, assembled by the producer, needs to include all of the test reports from the notified laboratories and the producer. Any notified laboratory involved in the ITT may request to examine the full ITT Report, in order to satisfy himself that all of the sample identities correspond with those provided to it for testing. . If they are not from the same batch, identification testing needs to allow the results to be compared with the other parts of the testing[8].

4.1.3 third possibility (system 4)

(1) No compulsory intervention of a third party in attestation of conformity. This does not, of course, prevent producers from having the necessary tests done by outside laboratories if they so choose (e.g. if they lack the facilities or expertise to carry out the tests and procedures themselves).

5. Notified bodies involved in the Attestation of Conformity

(1) Currently, different attestation and market surveillance systems are operational in the Member States. Many of the 'third parties' involved in these schemes will become Notified Bodies under article 18 of the Construction Products Directive. In each national system, a certain terminology is used for these bodies.

(2) Many Commission Decisions relating to the attestation of conformity of construction products are based on a cumulative procedure, in which different systems of AoC are allocated to the various possible intended uses (see footnote [4]) of a product. The type of notified body involved, if any, therefore depends upon

[8] This to allow the use of test results from different times during the development of new products

the range of intended uses that the producer chooses to make his product available for.

(3) It is not relevant to compare the role and tasks of the types of Notified Bodies under the CPD with existing terminology or practices in Member States as the functions of the latter are not necessarily equal to traditions under national systems.

(4) The Notified Bodies for one and the same product(s) or product characteristic (or type of test) need to regularly exchange their experience and the information necessary to perform their tasks in a way that the procedures are consistent and transparent and that the results are reproducible. This exchange should take place in the respective Sector Group of the Group of Notified Bodies (GNB). Matters of general interest should be put forward to the Advisory Group of the GNB.

5.1 Task sharing (subcontracting)

(1) For various reasons Notified Bodies can appoint subcontractors that perform tasks on their behalf. Annex 2 details the different types of Notified Bodies as defined in Annex III of the CPD and their roles under the various AoC systems. In many cases, Notified Bodies look for subcontractors to solve isolated problems (lack of capacity in their own laboratories, inspections in a plant across the border…).

(2) A subcontracting notified body remains responsible for all the activities covered by the notification. Subcontracting does not entail the delegation of powers or responsibilities. Certificates and reports are always issued in the name and under the responsibility of the subcontracting notified body but will indicate who has performed the actual tasks. Serial subcontracting is prohibited in order to avoid undermining the coherence of the system and the confidence in it.

(3) A notified body can subcontract strictly limited technical tasks (e.g. tests, factory production control audits), as long as these can be defined as substantial and coherent parts of the technical operation.

Two mechanisms for subcontracting can be identified.

On basis of a long-term contract:

(1) Subcontracting is permissible where a body, applying for notification, identifies clearly its sub-contractors and the role these are going to play in the attestation of conformity system.

(2) This kind of subcontractor does not need notification but should demonstrate to the respective Member State technical competence and impartiality by fulfilling the requirements of annex IV of the CPD for the tasks that are contracted to them.

(3) The Notified Body needs in all cases to have a direct private-law contractual link with its sub-contractors to ensure the fulfilling of its general responsibilities.

(4) This mechanism provides an answer where notified bodies seek solutions to enable them to give a complete service to Industry. Council Decision 93/465/EC[9] defines a number of conditions on sub-contracting.

Adapting this to the specific case of the CPD this means that the subcontracting of work needs to be subject to certain conditions guaranteeing:

- the competence of the establishment operating as a sub-contractor, on the basis of conformity with the requirements of Annex IV of the CPD, Guidance paper A and the respective harmonised technical specification, and the capability of the Member State that has notified the sub-contracting body to ensure effective monitoring of such compliance

- the ability of the body notified to exercise effective responsibility for the work carried out under sub-contract.

Subcontracting to other Notified Bodies

(1) To perform tasks, Notified Bodies can make use of the services of other Notified Bodies notified in the relevant area. The certificates or reports produced must clearly indicate who has performed a particular task. The overall responsibility remains with the sub-contracting Notified Body.

(2) This second type of sub-contracting assures transparency by public knowledge of the assessment of all the bodies involved by the respective Member State, involves all actors in the European co-ordination within the GNB and offers more possibilities to Industry.

6. Sample marking and Reporting

6.1 Marking of samples

(1) All samples to be used for testing purposes need to be suitably marked to allow a subsequent verification that the producer has fulfilled his obligations. This demonstrates that the manufacturer has followed the rules in the harmonised EN or ETA, that all tests have been carried out on the same batch of samples, if this is specified, and that the samples are representative for the product to be placed on the market.

(2) Sample-marking on the product will at least include production line, date and time of the taking of the sample. The sample identity needs to be recorded in all test reports to enhance trace ability.

(3) Products declared by the manufacturer to be defective may only be excluded from sampling if they have been set aside and marked accordingly.

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9 Council decision 93/465/EC concerning the modules for the various phases of the conformity assessment procedures and the rules for affixing and use of the CE conformity marking, which are intended to be used in the technical harmonisation directives.

(4) In the case of sampling by a Notified Body, the sampler needs to prepare and sign a record on sampling that needs to be countersigned by the manufacturer or his representative (when relevant). The record should at least include the following information:

- Manufacturer and manufacturing plant
- Place of sampling
- If necessary, stock or batch quantity (from which the samples have been taken)
- Number or quantity of samples
- Identification of the construction product in accordance with the technical specification
- Marking of the product by the manufacturer
- Marking of the samples by the sampler (when relevant)
- Where necessary, properties to be tested
- Place and date
- Signatures
- Registration number of the Notified Body

6.2 Test Reports

(1) The results of each test, independent of whether this test is part of the initial type test or audit testing by the manufacturer or a third party, need to be recorded in a *"test report"*. The test report should at least include the following information:

- Manufacturer and manufacturing plant
- Identification of the construction product in accordance with the relevant technical specification
- Information about
  - sampling
  - date of testing
  - involved personnel
  - applied testing methods according the relevant technical specification
- Identification of the organisation and personnel executing the test
- Place and date
- The results of the test, including analysis of these when relevant.
- Place and date of the delivery of the test report
- Registration number of the Notified Body (when relevant)
- Signature of the head of the testing laboratory and stamp (when relevant).

The test report must comply with the relevant clauses of the technical specifications. The complete set of test reports will be kept by the manufacturer and

the certification body (when relevant) and will be made available to the inspection body (where relevant) and market surveillance authorities on demand.

Test laboratories will keep the test reports that they have issued.

6.3 Note

Where possible, model reports and other model documentation should be developed by the specification writers and should be included in the technical specifications.

As an interim solution and to avoid extra work for the specification writers, the test reports may need to appear as separate documents developed by the relevant sector groups and/or the Advisory Group of the Group of Notified Bodies. Suitable common presentation should be assured by close collaboration between specification writers and the GNB.

7. References

Construction Products Directive.

CONSTRUCT 99/345 REV.3: Third party intervention in AoC

CONSTRUCT 99/342: Discussion paper on the notification of bodies by Member States and the relation with sub-contracting of tasks by Notified Bodies

Guidance paper A: The Designation of Notified Bodies in the field of the Construction Products Directive.

Guidance Paper B: The definition of Factory Production Control in technical specifications for construction products.

Guidance Paper D: CE marking under the construction products directive

Guidance Paper L: Application and use of Eurocodes

Guide to the implementation of Directives based on the New Approach and the Global Approach.

Annex 1: Attestation of Conformity Systems.

System	Task for manufacturer	Task for notified body	Basis for CE marking
4	Initial type testing of product Factory production control		Manufacturers conformity Declaration
3	Factory production control	Initial type of testing of product	
2	Initial type of testing of product Factory production control	Certification of factory production control on basis of initial inspection	Manufacturers conformity Declaration + certification of factory production control
2+	Initial type testing of product Factory production control Testing of samples according prescribed test plan	Certification of factory production control on basis of initial inspection continuous surveillance, assessment and approval of production control	
1	factory production control Further testing of samples according prescribed test plan	Certification of product conformity on basis of tasks of the notified body and the tasks assigned to the manufacturer Tasks for notified body: initial type-testing of the product; initial inspection of factory and of factory production control; continuous surveillance, assessment and approval of factory production control;	Manufacturers Conformity[10] Declaration accompanied by Certificate of product conformity
1+	Factory production control Further testing of samples according prescribed test plan	Certification of product conformity on basis of tasks of the notified body and the tasks assigned to the manufacturer Tasks for notified body: initial type-testing of the product; initial inspection of factory and of factory production control; continuous surveillance, assessment and approval of factory production control; audit-testing of samples taken at the factory, on the market or on the construction site	

[10] A declaration of conformity is always required (see Guidance paper D).

Annex 2

Table 1: Attestation of Conformity Systems and Tasks of the Notified Bodies

Text extract from CPD Annex III	Tasks	Attestation systems						Certification
Preference is given to application of the following systems of conformity attestation		1+	1	2+	2	3	4	required
(i) Certification of the conformity of the product by an notified certification body on the basis of:								
(a) (tasks for the manufacturer)								
(1) factory production control;	1	M	M					
(2) further testing of samples taken at the factory by the manufacturer in accordance with a prescribed test plan;	2	M	M					
(b) (tasks for the notified body)								
(3) initial type-testing of the product;	3	A	A					CP
(4) initial inspection of factory and of factory production control;	4	A	A					CP
(5) continuous surveillance, assessment and approval of factory production control;	5	A	A					CP
(6) audit-testing of samples taken at the factory , on the open market or on a construction site	6	A						CP
(ii) Declaration of conformity of the product by the manufacturer on the basis of:								
First possibility:								
(a) (tasks for the manufacturer)								
(1) initial type-testing of the product;	7			M	M			
(2) factory production control;	8			M	M			
(3) testing of samples taken at the factory in accordance with a prescribed test plan (*);	9			M				
(b) (tasks for the notified body)								
(4) certification of factory production control on the basis of:								
initial inspection of factory and of factory production control,	10			A	A			CF
continuous surveillance, assessment and approval of factory production control.	11			A				CF
Second possibility:								
(1) initial type-testing of the product by an notified laboratory;	12					L		Report only by L
(2) factory production control	13					M		
Third possibility:								
(a) initial type-testing by the manufacturer;	14						M	
(b) factory production control	15						M	

KEY (see also table 2 for definitions):

CP -certification body required for certification of the conformity of the product
CF - certification body required for certification of the factory production control
A - certification body or, when acting on behalf of a certification body, an inspection body and/or testing laboratory.
L - testing laboratory
M – manufacturer

(*) when required

Table 2: Bodies involved in Attestation of Conformity and their functions							
Text extract from CPD Annex III	Tasks	Attestation systems					
BODIES INVOLVED IN THE ATTESTATION OF CONFORMITY		1	1+	2	2+	3	4
With respect to the function of the bodies involved in the attestation of conformity, distinction needs to be made between							
(i) certification body, which means an impartial body, governmental or non-governmental, possessing the necessary competence and responsibility to carry out product conformity certification or FPC certification according to given rules of procedure and management;	3 to 6, 10 and 11	Y	Y	Y	Y		
(ii) inspection body, which means an impartial body having the organization, staffing, competence and integrity to perform according to specified criteria functions such as assessing, recommending for acceptance and subsequent audit of manufacturers' factory production control system	4, 5, 6,10, and 11	s	s	s	s		
(iii) testing laboratory, which means a laboratory which measures,examines,tests,calibrates or otherwise determines the characteristics or performance of materials or products.	3, 6 and 12	s	s			Y	
In case (i) and (ii) (first possibility) of paragraph 2, the three functions 3 (i) to (iii) may be performed by one and the same body or by different bodies, in which case the inspection body and/or the testing laboratory involved in the attestation of conformity carries out its function on behalf of the certification body.	Note: Inspection Bodies and Testing Laboratories can undertake the tasks but under systems 1, 1+, 2 and 2+ they do so on behalf of the certification body.						
KEY: Y - Body is involved in these tasks or in certification based on them. s - Body can undertake these tasks on behalf of a certification body.							

ANNEX 3

Specific aspects of attestation of conformity with regard to product performance characteristics determined by structural calculation.[11]

1. Calculation results accompanying CE marking of structural components and kits

(1) Regarding the performance characteristics relating to the essential requirements N° 1 (including such aspects of essential requirement N° 4 which relate to mechanical resistance and stability) and aspects of essential requirement N° 2 (resistance to fire) of the product, the manufacturer needs to provide, in accordance with the provisions of hEN/ETA, the declared performance(s) or values in the information accompanying the CE marking according to one of the following methods detailed in the Guidance Paper L, clause 3.3:

– Method 1, which is as follows:

The "declared information" consists of geometrical data of the component and / or kits and of properties of the materials and constituent products used (see Guidance paper L – clause 3.3.2)

What geometrical data and properties of material and constituent products are necessary to perform calculations of works and/or parts of them is listed in the product hEN or ETAG/CUAP/ETA. Related product information provided in the information accompanying the CE marking.

The calculation method of the structural characteristics is not relevant for the CE marking. The information accompanying the CE marking does not include performance characteristics based on calculation results. Instead, design calculations for specific works or parts of them, which are based on the information accompanying the CE marking, comply with the procedures implemented by the Member States in which the work is to be erected. They are performed by those who are entitled to do so, under these procedures.

– Method 2, which is as follows:

The mechanical resistance of the components or kits is determined by means of the calculation methods (e.g. Eurocodes) laid down in the hEN or ETAG/CUAP/ETA. The results are expressed as characteristic values or design values[12], and the information accompanying the CE marking includes all relevant parameters (e.g. characteristics of material and constituent products, partial factors) used to perform the calculation (see Guidance Paper L, 3.3.3).

The calculation method to obtain the structural performance characteristics and the results or the calculation is of relevance for the CE marking.

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[11] **This Annex could also be used as reference for products performance characteristics related to other essential requirements (e.g. essential requirements n° 5 – acoustic or n°6 – thermal performances) which are determined by calculation; however, in this case, the content of this guidance may need to be adjusted to suit specific aspects of the products and the calculation methods concerned.**

[12] Characteristic and design values are defined in the Eurocodes.

– Method 3, which is as follows:

The declared information is presented by reference to design documents of the works or client's order (see Guidance Paper L, 3.3.4), regardless whether the harmonised technical specification prescribes a calculation method to be used or not.

The manufacturer decides whether or not to accompany the CE marking with information regarding the product performance characteristics, by reference to the respective design documents (which may be based on harmonised calculation methods, i.e. Eurocodes, applied by the designer of the works or the product manufacturer, as agreed between the client and the manufacturer). If he does so, he is also responsible and liable for the performance of the product with regard to its design, which might mean that he ensures a verification of the design if he has doubts about its correctness. If he does not, the responsibility regarding the design of the product needs to be determined in the contract between the manufacturer and the one who orders the manufacturing of the product (the user or the designer, according to the given contractual relation) and/or, if relevant, according to the national legal requirements applicable.

(2) The decision to include one, two, or all these three methods in technical specification, is up to the specification or ETAG/CUAP writers. Nevertheless, they may exclude a method, if this is duly justified for technical reasons. The conditions to be applied for anyone of these methods need to be specified in the product hEN or ETAG/CUAP.

(3) This annex considers "initial type calculation" (ITC) as being performed on representative types of the product and part of the ITT (i.e. the product performance characteristics is determined by calculation and not by testing), while calculation performed on individual manufactured product may be part of the factory production control in analogy to "testing of samples taken at the factory" included in the Annex III of the CPD as a control method for AoC systems 1+, 1 and, where relevant, 2+.

(4) The product hEN or ETAG/CUAP should indicate which parts of calculations and input data have to be verified in the framework of the conformity assessment, and by whom, and in which cases it is necessary to be done for individual manufactured products.

2. Principles

(5) Within the systems of attestation of conformity referred to in Annex III of the CPD, for the "initial type testing" (ITT) of the product, calculations are to be considered as a part of the ITT. ITC can usually be performed for a product range[13]. However, where applicable, the product hEN or ETAG/CUAP should define small series production, for which ITC should be limited to the demonstration of the manufacturer's ability to perform the calculations specified in the harmonised technical specifications and his ability to take into account parameters that may change with new (small) series.

(6) Similarly, calculation might be part of "audit testing" in system 1+, although in many cases, performing new calculations by Notified Bodies should only be considered if

[13] group of products produced by one manufacturer for which the test results for one or more characteristics from any one product within the range are valid for all other products within this range

technically relevant, i.e. in case calculation methods, instruments or procedures changed since ITC.

(7) Document procedures regarding calculation should also be covered in the manufacturer's FPC system, similar to the provisions that apply when performances are determined by testing.

(8) The performance characteristics of products may be determined by calculation or testing. Both methods have the same status (see Guidance Paper L, clause 3.1.2). Therefore, calculation methods have to be considered as supporting tools (e.g. Eurocodes have to be considered as supporting standards) when they are referred to in harmonised technical specifications.

3. Specific tasks to be carried out according to the applicable system of Attestation of Conformity

3.1 Certification of conformity of the product (CPD III.2(i) - AoC systems 1 and 1+)

(9) Under the system of attestation of conformity 1 and 1+ of attestation of conformity, the responsibility for the Initial Type Testing, including ITC, lies with the Notified Body.

3.1.1 Methods 1 and 3 (when the calculation method is not covered by the harmonised technical specification):

(10) Regarding ITT, the Notified Body is responsible, in addition to performing tests, for verifying that the manufacturer has used correct methods and procedures for the determination of geometrical data of the product, and of the properties of the materials and constituent products used, including sampling (where relevant) in accordance with the provisions of the hEN or ETAG/CUAP..

(11) Regarding the initial inspection of the factory and of FPC and continuous surveillance, assessment and approval of FPC, the Notified Body evaluates the permanent internal control of production exercised by the producer.

(12) Regarding audit verification by/of calculation in place of audit testing (only system 1+), the Notified body is responsible for regular determination of geometrical data of the product, and of the properties of the materials and constituent products used, including sampling (where relevant).

3.1.2 Methods 2 and 3 (when the calculation method is covered by the harmonised technical specification):

(13) The Notified Body is responsible for the ITC according to the method given in the hEN or ETAG/CUAP. It checks and validates the calculation (tools and results) used by the manufacturer to design the product, by any appropriate means included in the hEN or ETAG/CUAP, judging and, if deemed appropriate, performing independent calculations for validation (see footnote [14], next page)and issuing the CE certificate of conformity. The Notified Body must be qualified for structural calculations by using the methods laid down in the technical specification and/or may be assisted by somebody who is so, provided that it maintains responsibility and liability for this task.

In more detail, regarding ITT and, in particular Initial Type Calculation (ITC), the Notified Body:

(a) Is responsible for the determination of geometrical data of the product, and of the properties of the materials and constituent products used, including sampling (where relevant). This provides input data for the calculations;

(b) Verifies that the calculation method used to determine the declared performances of mechanical properties for a product range complies with the requirements given in the hEN or ETAG/CUAP;

(c) Validates the input data used for the calculations (material and constituent product properties, applied partial factors, etc.) and, where relevant, that it has been processed with the correct tools (e.g. correct computer software);

(d) Endorses, by means of validation[14], the results of the ITC;

(e) Provides an ITC report in accordance with item 6.2 of this Guidance Paper, so that the certificate of conformity of the product can relate to the ITC report, which is a part of the ITT report.

(14) Regarding the initial inspection of the factory and of FPC and continuous surveillance, assessment and approval of FPC, the tasks of the Notified Body are those carried out under system 2 or 2+ (see § 3.2 below), notwithstanding (13) and (15).

(15) Regarding audit verification by/of calculation in place of audit testing (only system 1+), the Notified body:

(a) Is responsible for regular determination of geometrical data of the product, and of the properties of the materials and constituent products, including sampling (where relevant). This provides input data for the calculations;

(b) Verifies that the calculation method, applied to determine the declared mechanical performances, by type of product, continues to comply with the requirements of the hEN or ETAG/CUAP. This is of particular relevance in case the calculation method referred to or the calculation instrument or procedures change, and might be not necessary in other cases;

(c) Checks the constant compliance of input data for calculations (material and constituent product properties, assumed actions, partial factors) and, where relevant, of tools (e.g. computer software) to process them;

(d) Provides an audit report.

3.2 Declaration of conformity of the product (CPD III.2(ii) first possibility - AoC systems 2 and 2+).

[14] Taking into consideration manufacturers' wishes resulting from those of stakeholders on a given market, or according to an identified need, a Notified Body may perform itself a complete calculation or verification by partial calculation or needs to do so.

(16) Under the systems of attestation of conformity 2 and 2+, the responsibility for Initial Type Testing, including the ITC, lies with the manufacturer. The Notified Body does not validate the related calculation.

3.2.1 Methods 1 and 3 (when the calculation method is not covered by the harmonised technical specification):

(17) Regarding ITT, the manufacturer is responsible, for the methods and procedures used for the determination of geometrical data of the product and of the properties of the materials and constituent products, including sampling, and their indication as information accompanying the CE marking, in accordance with the provisions of the technical specification (hEN or ETA).

(18) Regarding initial inspection of the factory and of FPC (AoC system 2 and 2+) and continuous surveillance, assessment and approval of FPC (only AoC system 2+), the Notified Body evaluates the permanent internal control of production exercised by the producer, in particular with regard to documented procedures for the selection of representative samples according to the provisions of the hEN or ETAG/CUAP and the determination of product and material properties necessary as input for calculations. He checks whether the conditions of manufacturing the product allow the indications made by the manufacturer as information accompanying the CE marking to comply with the provisions of the technical specification.

3.2.2 Methods 2 and 3 (when the calculation method is covered by the harmonised technical specification):

(19) The Notified Body is only responsible for certifying that Factory Production Control complies with the requirements laid down in the product hEN or governing the ETA, on the basis of an initial inspection of the factory and factory production control and, in the case of system 2+, continuous surveillance, assessment and approval of the factory production control. Part of the initial inspection of the factory is also to verify that the manufacturer has undertaken an initial type calculation in accordance with the provisions of the hEN or ETAG/CUAP.

(20) Regarding ITT and related sampling, including the necessary ITC for the product range (as defined in hEN or ETA) and the determination of the input data for calculations (material and constituent product properties, partial factors, etc.), are under the responsibility of the manufacturer.

(21) Regarding the initial inspection of factory and of the Factory Production Control, the Notified Body evaluates whether the production system enables the achievement of the required product characteristics and the effective operation of FPC. In addition to checking whether the ITC has been performed and whether the method and the calculation process are documented[15], when the FPC includes calculation of the mechanical properties for the manufactured products (samples), the Notified body verifies that the manufacturer established, uses and maintains a documented FPC system in accordance with the product hEN or ETAG/CUAP ensuring:

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15 see Guidance Paper K, clause 2.4

(a) the correct selection of representative samples;

(b) for the various products manufactured, the correct determination of product and material properties necessary as input for calculations, for the individual products;

(c) adequate equipment and competent personnel to perform correct calculations;

(d) that the calculation has been performed, that its basis (e.g. safety factors used) is correct, and that the method, process and results used as a basis for performance declarations are adequately documented and registered;

(e) that, in the case of electronic processing and reporting, only sufficiently documented and validated software and properly functioning computer equipment are used, and adequate measures of data protection and integrity are in place.

(22) Regarding the continuous surveillance, assessment and approval of FPC (only system 2+) the tasks of the Notified Body are, with an appropriate frequency as specified in the product hEN or ETAG/CUAP, to verify that the documentation regarding the calculation method is still valid (regardless whether modified or not) and to check the continued use and maintenance of a documented FPC system in accordance with the product hEN or ETAG/CUAP ensuring (a) to (e) as listed in (21).

3.3. Declaration of conformity of the product, (CPD III.2(ii) second possibility - AoC system 3)

3.3.1 Methods 1 and 3 (when the calculation method is not covered by the harmonised technical specification):

(23) Regarding ITT, the Notified Body is responsible for the determination of geometrical data of the product and of the properties of the materials and constituent products used to manufacture the product. The manufacturer is responsible for sampling (if relevant).

3.3.2 Methods 2 and 3 (when the calculation method is covered by the harmonised technical specification):

(24) Regarding ITT, the Notified Body:

(a) Is responsible for the determination of geometrical data of the product and of the properties of the materials and constituent products used. This provides input data for the calculations;

(b) Verifies that the calculation method, applied to determine the declared performances of mechanical strength for a product range complies with the requirements given in the hEN or ETAG/CUAP;

(c) Validates the input data for calculations (material and constituent product properties, partial factors for materials applied in resistance calculation) and, where relevant, that it has been processed with the correct tools (e.g. correct computer software);

(d) Validates for endorsement[16] the results of the Initial Type Calculation;

(e) Provides an ITC report in accordance with item 6.2 of this Guidance Paper, so that the certificate of conformity of the product can relate to the ITC report, which is a part of the ITT report.

3.4. Declaration of conformity of the product, (CPD III.2(ii) third possibility - AoC system 4)

(25) Under AoC system 4, no compulsory intervention of a third party in attestation of conformity is required. This does not prevent producers from outsourcing the necessary calculations if they so choose (e.g. if they lack the facilities or expertise to carry out the calculations themselves). Therefore:

(a) The ITT, including the Initial Type Calculation, is the task of the manufacturer.

(b) Structural calculations for the individual products manufactured on the basis of the ITC, used for the evaluation of performances (declared values and classes accompanying the CE marking) are part of the Factory Production Control.

4. Specific aspects of control of conformity with technical specifications developed in European Technical Approvals (ETAs)

(26) In the case of an ETA, with or without guideline, the Approval Body will usually have validated the calculation method to be used, by using it directly to determine the product characteristics when it undertakes the tasks to issue the ETA itself. Then, the role of the Notified Body is restricted to assess, depending on the AoC system involved, the conformity of the product and / or production with what has been specified in the ETA, but it does not need to validate the calculation method used.

(27) In cases, where the manufacturer presents to the Approval Body a large range of products, the Approval Body might include in the ETA itself the calculation method it judges suitable, allowing the manufacturer to calculate himself product performances for the entire product range. In this case the Approval Body already validates the calculation method and the conditions under which it should be used, by introducing it in the ETA. The role of the Notified Body is then limited to verifying that the manufacturer uses the calculation method as indicated for determining the relevant product performance, but does not need to validate the calculation method as such.

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[16] The Notified Body may also perform itself, if he wishes, independent partial or complete calculations.

EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL
Single Market : regulatory environment, standardisation and New Approach
Construction

Brussels,
27 November 2003
ENTR/G5

GUIDANCE PAPER L

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

APPLICATION AND USE OF EUROCODES

(Version 27 November 2003)

Preface

EN Eurocodes can be used to determine the performance of structural components and kits, which are construction products. In that context, EN Eurocodes relate to the Construction Product Directive (89/106/EC)

Furthermore, the Commission considers that the use of EN Eurocodes as the design method for buildings and civil engineering works is the recommended means of giving a presumption of conformity with the essential requirements N°1 and aspects of N°2, in the sense of article 2.1 of the Construction Products Directive

The Member States represented in the Standing Committee on Construction have expressed their opinion and their support by endorsement of this Guidance Paper, which becomes one of the series of Guidance Papers dealing with specific matters related to the implementation 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.

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GUIDANCE PAPER L

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

APPLICATION AND USE OF EUROCODES

- *This Guidance Paper was originally issued after consultation of the Standing Committee on Construction at the 53rd meeting on 19 December 2001 and written procedure ended on 25 January 2002, as document CONSTRUCT 01/483 Rev.1.*

- *It has been modified (edited version only, changing the format but not the content) the 11 April 2003.*

- *It has been amended (clauses 2.3.2, 2.3.8, 3.3.3.2.b) and 3.3.4) after consultation of the Standing Committee on Construction at the 58th meeting on 11 November 2003, as document CONSTRUCT 03/629 Rev.1 (27 November 2003).*

This Guidance Paper "application and use of Eurocodes" has been prepared by the European Commission services in close co-operation with the authorised Representatives of the Member States (Eurocode National Correspondents). The Commission will monitor the matters related to this Guidance Paper. When necessary, the Guidance Paper will be reviewed in the light of the experience made in its application.

Summary

ABBREVIATIONS

CPD	Construction Products Directive (see references)
PPD	Public Procurement Directives (see references)
SCC	Standing Committee on Construction (articles 19 and 20 of the CPD)
ID	Interpretative Documents (article 11 of the CPD)
ENV	European pre-standard
ENV Eurocode	Version of Eurocode published by CEN as a pre-standard ENV (for subsequent conversion into EN)
NAD	National Application Document for the use of ENV Eurocodes at the National level
EN	European standard
EN Eurocode	Version of Eurocode approved by CEN as a European standard
hEN	Harmonised European standard for a construction product (to enable CE Marking)
NDP	Nationally Determined Parameter
DAV	Date of availability of the EN standard
DoW	Date of withdrawal of a conflicting national standards
CEN	Comité Européen de Normalisation (European Standardisation Organisation)
CEN/MC	CEN Management Centre
NSB	National Standards Body (CEN Member)
EOTA	European Organisation for Technical Approval (article 9.2 of the CPD)
ETA	European Technical Approval
ETAG	European Technical Approval Guideline
EEA	European Economic Area
EC	European Commission services

DEFINITIONS

Approval Body	Body authorised to issue European Technical Approvals (Article 10 of the CPD), Member of EOTA)
Boxed Value	The Boxed Value, used at the ENV stage together with the National Application Documents, offered a National choice for a value. It has to disappear in the EN Eurocodes
Construction Works	Building and Civil Engineering Works
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 (article 8, 9 and 4.2 of the CPD) An ETA can be issued on the basis of a Guideline (article 9.1 of the CPD) or without guideline (article 9.2 of the CPD)
European Technical Approval Guideline (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, written by EOTA on the base of a mandate received from the Commission (article 9.1 and 11 of the CPD)
National Annex (to an EN Eurocode Part)	Annex to an EN Eurocode Part containing the Nationally Determined Parameters (NDPs) to be used for the structural design of buildings and civil engineering works in a Member State.
National Application Document (NAD)	The NADs, which were used at the ENV stage, expressed national choices, in particular wherever "Boxed Values" (see above) were given in the ENV Eurocodes
National Provisions	National laws, regulations and administrative provisions, imposed by all levels of public authorities, or private bodies acting as a public undertaking or as a public body on the basis of a monopoly position.

Nationally Determined Parameter (NDP)	A National choice left open in a EN Eurocode about values (where symbols are given in the EN Eurocodes), classes or alternative procedures permitted within the EN Eurocodes
Technical Specifications	Harmonised European Standards (hENs) and European Technical Approval (ETAs) for construction products (article 4.1 of the CPD)
Structure	Load-bearing construction, i.e. organised assembly of connected parts designed to provide mechanical resistance and stability to the works (ID 1, clause 2.1.1)
Structural	Relating to a structure
Structural material	Material or constituent product with properties which enter into structural calculations or otherwise relate to the mechanical resistance and stability of works and parts thereof, and/or to their fire resistance, including aspects of durability and serviceability
Structural component	Components to be used as load-bearing part of works designed to provide mechanical resistance and stability to the works and/or fire resistance, including aspects of durability and serviceability, (ID 1, clause 2.1.1).
Structural kit	Kit consisting of structural components to be assembled and installed on site. The assembled system made from the structural kit is a "structure".
Material hEN or ETA	The hEN or ETA for a material or constituent product, with properties which enter into structural calculations of works or otherwise relate to their mechanical resistance and stability and/or fire resistance, including aspects of durability and serviceability, such as concrete, reinforcing steel for concrete, certain structural steel products, fire protection materials.
Component hEN or ETA	hEN or ETA for a prefabricated structural component or a kit consisting of structural components, such as prefabricated concrete components, prefabricated stairs or timber frame building kits, with properties determined by calculation applying methods which are used also for structural design of works.

REFERENCES

CPD	Construction Products Directive 89/106/EEC, as amended by CE Marking Directive 93/68/EEC
PPD	Public Procurement Directives. This Guidance Paper refers to the Council Directive 93/37/EEC of 14 June 1993 concerning the co-ordination of procedures for the award of public works contracts
Guidance Paper C	The treatment of kits and systems under the Construction Products Directive (CONSTRUCT 96/175 Rev.2, 3 Feb. 1997 – Rev. Aug 2002)
Guidance Paper D	CE Marking under the CPD (CONSTRUCT 97/220 Rev.5, 10 Dec. 1998 – Rev. Aug 2002)
Guidance Paper E	Levels and classes under the CPD (CONSTRUCT 99/337 Rev.1, 1 Jul 1999 – Rev. Aug 2002)
Guidance Paper F	Durability aspects under the CPD (CONSTRUCT 99/367, 1 Jul 1999 – Rev. Aug 2002)
Guidance Paper J	Transitional Arrangements under the CPD (CONSTRUCT 01/477, 22 May 2001 – Rev. Aug 2002)
Guidance paper K	The attestation of conformity systems and the role and tasks of the notified bodies in the field of the Construction Product Directive (CONSTRUCT 00/421, 5 July 2000 – Rev. Aug 2002)

Part 1: General

1.1 Aims and benefits of the Eurocode programme

1.1.1. The Eurocodes provide common design methods, expressed in a set of European standards, which are intended to be used as reference documents for Member States to:

- prove the compliance of building and civil engineering works or parts thereof with Essential Requirement n°1 Mechanical resistance and stability (including such aspects of Essential Requirement n°4 Safety in use, which relate to mechanical resistance and stability) and a part of Essential Requirement n°2 Safety in case of fire, including durability, as defined in Annex 1 of the CPD

- express in technical terms , these Essential Requirements applicable to the works and parts thereof;

- determine the performance of structural components and kits with regard to mechanical resistance and stability and resistance to fire, insofar as it is part of the information accompanying CE marking (e.g. declared values).

1.1.2. EN Eurocodes are intended by the European Commission services, and the Member States, to become the European recommended means for the structural design of works and parts thereof, to facilitate the exchange of construction services (construction works and related engineering services) and to improve the functioning of the internal market.

In approving the mandate to CEN to prepare the EN Eurocodes, Member States have recognised Eurocodes as an acceptable means to achieve these aims and to prove compliance of construction works with the respective Essential requirements, in their territory. However, following the spirit of the new approach, Members States may recognise also other means as being acceptable for these purposes (see 2.1.7).

The Commission expects CEN to publish all of the standards[1] constituting the different parts of the EN Eurocodes, and expects the Member States to implement these standards as an acceptable means for the design of works, in their territory.

[1] At present the program contains 58 Parts

1.1.3 The intended benefits and opportunities of Eurocodes are to:

- provide common design criteria and methods to fulfil the specified requirements for mechanical resistance, stability and resistance to fire, including aspects of durability and economy,
- provide a common understanding regarding the design of structures between owners, operators and users, designers, contractors and manufacturers of construction products
- facilitate the exchange of construction services between Members States,
- facilitate the marketing and use of structural components and kits in Members States,
- facilitate the marketing and use of materials and constituent products, the properties of which enter into design calculations, in Members States,
- be a common basis for research and development, in the construction sector,
- allow the preparation of common design aids and software,
- increase the competitiveness of the European civil engineering firms, contractors, designers and product manufacturers in their world-wide activities.

1.2 Background of the Eurocode programme

1.2.1. In 1975, the Commission of the European Community decided on an action programme in the field of construction based on article 95 of the Treaty. The objective of the programme was the elimination of technical obstacles to trade and the harmonisation of technical specifications.

1.2.2. Within this action programme, the Commission took the initiative to establish a set of harmonised technical rules for the structural design of construction works which, in the first stage, would serve as an alternative to the national rules in force in the Member States and, ultimately, would replace them.

1.2.3. For fifteen years, the Commission, with the help of a Steering Committee containing Representatives of Member States, conducted the development of the Eurocodes programme, which led to the publication of a set of first generation European codes in the 80's.

1.2.4. In 1989, the Commission and the Member States decided, on the basis of an agreement with CEN[2], endorsed by the SCC, to transfer the preparation and the

[2] Agreement between the Commission of the European Communities and the European Committee for Standardisation (CEN) concerning the work on EUROCODES for the design of building and civil engineering works (CONSTRUCT 89/019).

publication of the Eurocodes to CEN through a Mandate, in order that they would, in the future, have the status of European Standards.

Note: This links the Eurocodes with the provisions of the Council's Directives and Commission's Decisions dealing with European standards (e.g. the CPD and Public Procurement Directives initiated to assist with setting up the internal market).

1.2.5. Originally, the Eurocodes were elaborated by CEN as 62 pre-standards (ENVs). Most were published between 1992 and 1998, but, due to difficulties in harmonizing all the aspects of the calculation methods, the ENV Eurocodes included "boxed values" which allowed Members States to chose other values for use on their territory. National Application Documents, which gave the details of how to apply ENV Eurocodes in Member States, were, generally, issued with a country's ENV.

The conversion of ENVs into European standards started in 1998. Publication of the EN Eurocode Parts is expected between 2002 and 2006.

1.2.6. The Eurocodes, insofar as they concern construction works, have a direct relationship with Interpretative Documents[3], referred to in Article 12 of the CPD[4]. Therefore, technical aspects arising from the Eurocodes have to be taken into account by CEN Technical Committees, EOTA Working Groups and EOTA Bodies working on product specifications, with a view to achieving full compatibility between the product specifications and the EN Eurocodes.

1.2.7. The European Commission has supported, from the beginning, the elaboration of Eurocodes, and contributed to the funding of their drafting. It continues to support the task mandated to CEN to achieve the publication of EN Eurocodes. It will watch the implementation and use of the EN Eurocodes in the Member States.

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[3] According to Art. 3.3 of the CPD, the essential requirements (ERs) shall be given concrete form in interpretative documents for the creation of the necessary links between the essential requirements and the mandates for hENs and ETAs.

[4] According to Art. 12 of the CPD the interpretative documents shall:

a) give concrete form to the essential requirements by harmonising the terminology and the technical bases and indicating classes or levels for each requirement where necessary;

b) indicate methods of correlating these classes or levels of requirement with the technical specifications, e.g methods of calculation and of proof, technical rules for project design, etc.;

c) serve as a reference for the establishment of harmonised standards and guidelines for European technical approval.

The Eurocodes, de facto, play a similar role in the field of the ER 1 and a part of ER 2.

1.3 Objectives of the Guidance Paper

1.3.1. This Guidance Paper expresses, with the view of achieving the aims and benefits of the Eurocode programme mentioned in 1.1, the common understanding of the Commission and the Member States on:

- The application of EN Eurocodes in the structural design of works (chapter 2).

- The use of EN Eurocodes in harmonised standards and European technical approvals for structural construction products (chapter 3). A distinction is made between:

  – products with properties which enter into structural calculations of works, or otherwise relate to their mechanical resistance and stability, including aspects of durability and serviceability, and which for this reason should be consistent with the assumptions and provisions made in the EN Eurocodes ("structural materials" are the most concerned - see chapter 3.2)

  – products with properties which can directly be determined by methods used for the structural design of works, and thus should be determined according to the EN Eurocode methods (prefabricated "structural components and kits" are the most concerned - see chapter 3.3).

1.3.2. The objectives of this document are to:

- Give guidance on the elaboration, implementation and use of the EN Eurocodes

- Provide, for the writers of EN Eurocodes, the framework in which they will elaborate or finalise the EN Eurocodes on the basis of the existing ENV Eurocodes

- Provide, for the writers of product specifications, the framework in which they will make reference to incorporate, or to take into account, the EN Eurocode Parts in harmonised standards and European technical approvals for structural products as explained in 1.3.1,

- Allow for the inclusion in EN Eurocodes and in technical specifications for structural products the necessary parameters or classes or allowance for levels to enable the Member States to choose the level of safety, durability and economy applicable to construction works, in their territory,

- Provide to Member States and the authorities concerned the elements needed to prepare public contracts, in respect of the Public Procurement Directive

1.3.3. This Guidance Paper considers all the issues and conditions related to the satisfactory implementation of the EN Eurocodes, as well as their links to the implementation of the CPD.

1.3.4. This Guidance Paper is intended for enforcement authorities, regulators, national standards bodies, technical specification writers, notified bodies and industry.

1.3.5. In the context of this Guidance Paper, references to Member States also apply to the European Free Trade Association (EFTA) States, members of the European Economic Area EEA. References to specification writers apply to CEN and CENELEC as well as to EOTA and the EOTA bodies issuing ETAs.

Part 2:
Use of EN Eurocodes for structural design of works

2.1 National Provisions for the structural design of works

2.1.1. The determination of the levels of safety[5] of buildings and civil engineering works and parts thereof, including aspects of durability and economy[6], is, and remains, within the competence of the Member States.

2.1.2. Possible differences in geographical or climatic conditions (e.g. wind or snow), or in ways of life, as well as different levels of protection that may prevail at national, regional or local level in the sense of article 3.2 of the CPD[7], will be taken into account, in accordance with Guidance Paper E, by providing choices in the EN Eurocodes for identified values[8], classes[9], or alternative methods[10], to be determined at the national level (named Nationally Determined Parameters). Thus allowing the Member States to choose the level of safety, including aspects of durability and economy, applicable to works in their territory.

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[5] The word safety is encompassed in the Eurocodes in the word reliability

[6] The introductory provisions of Annex I of the CPD lay down: *"The products must be suitable for construction works which (as a whole and in their separate parts) are fit for their intended use, account being taken of economy, and in this connection satisfy the following essential requirements where the works are subject to regulations containing such requirements. Such requirements must, subject to normal maintenance, be satisfied for an economically reasonable working life. The requirements generally concern actions which are foreseeable."* Aspects of economy include aspects of serviceability.

[7] Article 3.2 of the CPD says that for each essential requirement classes may be established in the interpretative documents and the technical specifications (hENs and ETAs) *"in order to take account of possible differences in geographical or climatic conditions or in ways of life as well as different levels of protection that may prevail at national, regional or local level".* This applies to the Eurocodes in so far as they give concrete form to ER 1 and a part of ER 2.

[8] "*Choices about values"* will be made where symbols are given in the EN Eurocodes in order to identify a value to be determined nationally

[9] Generally, the classes to be envisaged should have the status of *"technical classes"* in the sense of guidance paper E (see articles 4.2, 4.3 and 4.4 of the Guidance paper). *"Regulatory classes*" should only be envisaged in cases in which this is necessary to ensure full implementation in the Member States.

[10] *"Choices about methods"* will be made where alternative methods of calculation are included in the EN Eurocodes which are identified to be chosen nationally

2.1.3. When Member States lay down their Nationally Determined Parameters, they should:

- choose from the classes included in the EN Eurocodes, or
- use the recommended value, or choose a value within the recommended range of values, for a symbol where the EN Eurocodes make a recommendation[11], or
- when alternative methods are given, use the recommended method, where the EN Eurocodes make a recommendation,
- take into account the need for coherence of the Nationally Determined Parameters laid down for the different EN Eurocodes and the various Parts thereof.

Member States are encouraged to co-operate to minimise the number of cases where recommendations for a value or method are not adopted for their nationally determined parameters. By choosing the same values and methods, the Member States will enhance the benefits listed in 1.1.3

2.1.4. The Nationally Determined Parameters laid down in a Member State should be made clearly known to the users of the EN Eurocodes and other parties concerned, including manufacturers.

2.1.5. When the EN Eurocodes are used for the design of construction works, or parts thereof, the Nationally Determined Parameters of the Member State on whose territory the works are located shall be applied.

Note: Any reference to a EN Eurocode design should include the information on which set of Nationally Determined Parameters was used, whether or not the Nationally Determined Parameters that were used correspond to the recommendations given in the EN Eurocodes (see 2.1.3).

2.1.6. National Provisions should avoid replacing any EN Eurocode provisions, e.g. Application Rules, by national rules (codes, standards, regulatory provisions, etc.).

When, however, National Provisions do provide that the designer may – even after the end of the coexistence period - deviate from or not apply the EN Eurocodes or certain provisions thereof (e.g. Application Rules), then the design will not be called "a design according to EN Eurocodes".

2.1.7. When Eurocode Parts are published as European standards, they will become part of the application of the Public Procurement Directive.

In all cases, technical specifications shall be formulated in public tender enquiries and public contracts by referring to EN Eurocodes, in combination with the Nationally Determined Parameters applicable to the works concerned, apart from the exceptions expressed in article 10.3 (Directive 93/37, article 10.2).

[11] see EN 1991-1.1 – foreword – National standards implementing EN Eurocodes

However, in application of the PPD, and following the spirit of the New Approach, the reference to EN Eurocodes is not necessarily the only possible reference allowed in a Public contract.. The PPD foresees the possibility for the procuring entity to accept other proposals, if their equivalence to the EN Eurocodes can be demonstrated by the contractor.

Consequently, the design of works proposed in response to a Public tender can be prepared according to:

– EN Eurocodes (including NDPs), which give a presumption of conformity with all legal European requirements concerning mechanical resistance and stability, fire resistance and durability, in compliance with the technical specifications required in the contract for the works concerned;

– Other provisions expressing the required technical specification in terms of performance. In this case, the technical specification should be detailed enough to allow tenderers to know the conditions on which the offer can be made and the owner to choose the preferred offer. This applies, in particular, to the use of national codes, as long as Member States maintain their use in parallel with EN Eurocodes (e.g. a Design Code provided by National Provisions), if also specified to be acceptable as an alternative to an EN Eurocode Part by the Public tender.

2.2 Indications to writers of EN Eurocodes

2.2.1. When preparing the EN Eurocodes for the design and execution of works, CEN/TC 250 shall provide for National choices as relevant, in accordance with 2.1.2.

2.2.2. When converting the ENV Eurocodes into EN Eurocodes:

– "Boxed values" which do not relate to safety levels and differences referred to in 2.1.2 should be transformed into unique values.

– "Boxed values" which relate to safety levels and differences referred to in 2.1.2 should be replaced by Nationally Determined Parameters. Where relevant, the possible range for these Parameters should be given for information. “Boxed values“ which have an influence on the level of serviceability or durability should be treated as Nationally Determined Parameters.

Note: This request satisfies the requirement of the Mandate to eliminate the “boxed values” or, where necessary, to transform them into classes.

2.2.3. The EN Eurocodes should be formulated in such a way that they can easily be referred to in hENs, ETAGs and ETAs for construction products, in particular those for structural components and kits. Therefore, reference in EN Eurocodes to other standards should only be made when, and as far as is necessary, technical criteria are to be defined; the references should be unambiguous. In order to prevent ambiguity, the normative text should not contain “open ends” or allow different interpretations. General references should be avoided.

2.2.4. Where EN Eurocodes give technical classes or threshold values (in the sense of Guidance Paper E), it should be made clear that these classes or threshold values are applicable only to the design of works. They may not be relevant for harmonised specifications for structural components or kits, which must have the possibility to include other classes or threshold values, as appropriate, such as those that have been used up to now, for structural components legally placed on the market[12].

2.2.5. The EN Eurocodes should be formulated in such a way that the reader of the ENs will be aware that, by definition, design "according to the EN Eurocodes" means compliance with all of the EN Eurocodes provisions, i.e. Principles and Application Rules, together with the respective Nationally Determined Parameters.

Note: Providing the possibility of deviating from, or not applying the EN Eurocodes or certain provisions thereof (e.g. Application Rules) is not a matter to deal with in the EN Eurocodes themselves, but only for the National Provisions implementing them (see 2.1.6).

2.2.6. The EN Eurocodes should be formulated in such a way that a proper distinction is made between calculation methods and administrative provisions on which the National Annex can give information.

2.2.7. In order to improve the transparency and the applicability of the Eurocodes system, each EN Eurocode Part shall include the full list of the symbols, classes or methods for which a choice or determination at national level is possible (NDPs - see 2.3.3).

2.2.8. No delay or objection should be caused as a result of including fundamental changes or new rules, during the conversion from the ENV to EN, in fields in which there is no, or not sufficient, practical experience in Member States.

2.2.9. References in an EN Eurocode Part to other Parts should, where possible, be made only to the EN version of those parts.

2.2.10. When specifying materials and constituent products in EN Eurocodes, CEN/TC 250 shall take account of the following:

– Materials and constituent products with properties which enter into the calculation of structures (e.g. by characteristic values), or otherwise relate to the mechanical resistance and stability and/or fire resistance of the works, including aspects of their durability, should be specified in EN Eurocodes by reference to the respective product hENs, or ETAs. If an hEN or ETA is not yet available or is not foreseen, see footnote 30 and 34.

– For the transitional period during which hENs or ETAs for materials or constituent products are not available or are not binding (i.e. during the co-existence period), EN Eurocodes should, as far as practicable, give, in an informative part, information regarding the properties of materials and constituent products

[12] This applies e.g. to the concrete cover to reinforcing steel which, according to existing national rules for pre-cast concrete components, may be less than the minimum concrete cover for in situ works according to EN Eurocodes

necessary for the structural design of works, according to the EN Eurocodes, and they should state that the respective material and constituent product specifications may be subject to the National Provisions of the Member State in which the works are located[13].

2.3 National Annexes of the EN Eurocode Parts

2.3.1. When a Eurocode Part is circulated by CEN for publication as an EN, the final text of the approved EN, according to CEN rules, is made available by CEN Management Centre to CEN members (the NSBs) in the 3 official languages (English, French and German)[14].

Each NSB shall implement this EN as a national standard by publication of an equivalent text (i.e. a version translated into another language) or by endorsement of one of the 3 language versions provided by CEN Management Centre (by attaching an "endorsement sheet"), within the timescale agreed for publication.

The National standard transposing the EN Eurocode Part, when published by a National Standards Body (NSB), will be composed of the EN Eurocode text (which may be preceded by a National title page and by a National Foreword), generally followed by a National Annex.

2.3.2. The National Standards Bodies should normally publish a National Annex, on behalf of and with the agreement of the national competent authorities.

A National Annex is not necessary if an EN Eurocode Part contains no choice open for Nationally Determined Parameters, or if an EN Eurocode Part is not relevant for the Member State (e.g. seismic design for some countries).

A National Annex is neither necessary if a Member State has adopted the recommended values provided in an EN Eurocode part as Nationally Determined Parameters applicable in its territory. Information, for instance in the foreword of the EN Eurocode part concerned, indicating that the recommended values are applicable should be sufficient in such a case.

Note: As stated by the CEN Rules, the National Annex is not a CEN requirement (a NSB can publish an EN Eurocode Part without one). However, in the context of this Guidance Paper, the National Annex serves for NSBs to publish the Nationally Determined Parameters, which will be essential for design.

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[13] For as long as references to the respective hEN has not been published in the Official Journal of the European Communities or the letter from the Commission informing Member States on the endorsement of the respective ETA Guideline has not been sent to Member States and its period of coexistence has not yet ended (for further information see Guidance Paper J).

[14] This step correspond to the DAV – Date of Availability

2.3.3. The National Annex may contain[15], directly or by reference to specific provisions, information on those parameters which are left open in the Eurocodes for national choice, the Nationally Determined Parameters, to be used for the design of buildings and civil engineering works to be constructed in the country concerned, i.e:

- values and/or classes where alternatives are given in the EN Eurocode,
- values to be used where a symbol only is given in the EN Eurocode,
- country specific data (geographical, climatic, etc.), e.g. a snow map,
- the procedure to be used where alternative procedures are given in the EN Eurocode,

It may also contain the following:

- decisions on the application of informative annexes, and,
- reference to non-contradictory complementary information to assist the user in applying the Eurocode.

2.3.4. A National Annex cannot change or modify the content of the EN Eurocode text in any way other than where it indicates that national choices may be made by means of Nationally Determined Parameters.

2.3.5. The National Annex of an EN Eurocode Part will normally be finalised when the safety and economy levels have been considered, i.e. at the end of the period allocated for the establishment of the Nationally Determined Parameters (see Annex A).

2.3.6. If a Member State does not choose any NDPs, the choice of the relevant values (e.g. the recommended value), classes or alternative method will be the responsibility of the designer, taking into account the conditions of the project and the National provisions.

2.3.7. The National Annex has an informative status. The content of a National Annex can be the basis for a national standard, via the NSB, and/or can be referred to in a National Regulation.

2.3.8. National Annex may be provided by the NSBs attached to the body of the corresponding EN Eurocode Part. But it has also to be kept accessible (sold) separately from the body of the EN Eurocodes Parts.

2.3.9. The National Annex can be amended, if necessary, according to CEN rules.

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[15] See EN 1990 and EN 1991 Part 1-1 – Foreword – National standards implementing Eurocodes

2.4 Packages of EN Eurocode Parts

2.4.1. The purpose of defining packages, by grouping Parts of EN Eurocode, is to enable a common date of withdrawal (DoW)[16] for all of the relevant parts that are needed for a particular design. Thus conflicting national standards shall have been withdrawn at the end of the coexistence period, after all of the EN Eurocodes of a package are available, and National Provisions will have been adapted by the end of the National Calibration period, as described in Annex A. Publication of the individual Parts in a Package is likely to occur over a long period of time so that, for many Parts, the coexistence period will be much longer than the minimum given in 2.5.5. When a National standard has a wider scope than the conflicting Eurocode Package, only that part of the National standard whose scope is covered by the Package has to be withdrawn.

When more than one package of EN Eurocodes is likely to be needed for the design of works the dates of withdrawal of the related Packages can be synchronised.

2.4.2. No Parts from EN 1990 or the EN 1991, EN 1997 or EN 1998 series form a package in themselves; those Parts are placed in each of the Packages, as they are material independent.

2.4.3. The list of the EN Eurocode Parts contained in the various Packages for each of the main materials, i.e. concrete, steel, composite concrete and steel, timber, masonry and aluminium, and their respective target dates, will be up dated and made available through the CEN/MC web-site[17] (see Annex C which presents the packages as they are currently foreseen)

2.5 Arrangements for the implementation of EN Eurocodes and period of co-existence with national rules for the structural design of works

2.5.1. The arrangements for the implementation of an EN Eurocode Part include, from the time the final draft[18] of the EN Eurocode is produced by the CEN/TC250, five periods:

Two periods before the date of availability (DAV):

- Examination period.
- CEN process period.

Three periods after the date of availability:

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[16] At the date of withdrawal related to a new standard, all the specifications existing previously in the National collection of standards conflicting with the new standard have to be withdrawn and the national provisions have to be adapted to allow the legitimate use of EN Eurocodes

[17] Address: http://www.cenorm.be/sectors/construction/eurocode.htm

[18] CEN/MC will communicate this date on its web-site

- Translation period,
- National calibration period,
- Coexistence period,

The detailed content of each of the five periods is given in the table and chart in Annex A.

The progress of each EN Eurocode (or package), within these periods, will be provided by CEN/MC on their web-site.

2.5.2. The following basic requirements need to be fulfilled by the EN Eurocode Parts in order to be referred to in the national provisions:

– Calculations executed on the basis of the Eurocode Part, in combination with the Nationally Determined Parameters, shall provide an acceptable level of safety.

– The use of the EN Eurocode Part, in combination with the Nationally Determined Parameters, does not lead to structures that cost significantly more, over their working life[19], than those designed according to National standards or provisions, unless changes in safety have been made and agreed.

2.5.3. The European Commission encourages Member States to implement EN Eurocodes in the framework of their National Provisions. During the coexistence period, the construction regulation authorities should accept the use of EN Eurocodes, as an alternative to the previous rules (e.g. National codes, standards or other technical rules included, or referred to, in national provisions) for the design of construction works. Member States are also encouraged to adapt their national provisions to withdraw conflicting national rules before the end of the co-existence period.

2.5.4. When an EN Eurocode Part is made available, the Member States should:

- set officially, before the end of the National calibration period (see Annex A), the Nationally Determined Parameters to be applied on their territory. In the event of any unexpected obstacles to carrying out the calibration of an EN Eurocode Part, the Member State shall inform the Commission, when an extension of the period could be agreed by the SCC.
- adapt, as far as necessary, their National Provisions so that the EN Eurocode Part can be used on their territory:
  – as a means to prove compliance of construction works with the national requirements for "mechanical resistance and stability" and "resistance to fire", in the sense of Annex I of the CPD, and

[19] see Interpretative Document 1, clause 1.3.5

– as a basis for specifying contracts for the execution of public construction works and related engineering services. If no NDPs are to be produced for an EN Eurocode Part the co-existence period begins at DAV and ends at DoW. Thus the EN Eurocode is available and any existing national standard is still available, so that both can be used during this period.

At the end of the "coexistence period" of the last EN Eurocode Part of a Package, the Member States should have adapted all their National Provisions which lay down (or refer to) design rules within the scope of the relevant Package.

2.5.5. Owing to the need for operational Packages (as defined in 2.4), the reference to the coexistence period of a Package is defined as the coexistence period of the last Eurocode Part of that Package. In Member States intending to implement EN Eurocodes, the coexistence period of this last part should be three years. After the three years coexistence period of the last EN Eurocode Part of a Package, the whole Package-related former conflicting national standards will be withdrawn, i.e 5 years maximum after DAV[20]. Conflicting National Provisions that would not allow the use of the first parts of a Package should be arranged, in order to allow the legitimate use of those Parts.

2.5.6. In order to increase the overall transparency of the implementation of the EN Eurocodes, the Commission wishes to be informed, by the Member States, of the main phases: translation, national calibration and coexistence Period, for each EN Eurocode Part, and the adaptation of National Provisions.

<u>Note:</u> the Commission intends to prepare, for this purpose, a "test reporting form" on the basis of the items mentioned in the Annex B.

[20] It is intended that the end of the coexistence period for each package will be laid down by the Commission after consultation of Member States

Part 3:
Use of EN Eurocodes in technical specifications for structural products

Note: This part of the Guidance Paper only deals with such structural products, which are construction products in the sense of the CPD.

3.1 Distinction between specifications for material with properties to be determined by test and specifications for components with properties to be determined by calculation

3.1.1. It follows from the CPD[21] and the Interpretative Documents[22] that there is a need for consistency between the technical specifications for construction products (hEN and ETA) and the technical rules for works.

3.1.2. For construction products, which contribute to the mechanical resistance and stability and/or fire resistance of works, two types of properties are distinguished, according to the validation method:

- Properties to be determined by testing (generally in the case of structural materials and constituent products, such as concrete, reinforcing steel for concrete, fire protection material, etc.), and

- Properties to be determined by calculation following methods, which are also used for the structural design of works (generally for prefabricated structural components and kits, consisting of structural components, such as prefabricated concrete components, prefabricated stairs, timber frame buildings kits, etc.).

For both types of product properties the resulting values are to be "declared" in the information accompanying the CE marking[23] of the product and used in the structural design of works or parts thereof.

3.1.3. For the reference to, or use of, EN Eurocodes in harmonised product specifications a distinction is made in this Part 3 between:

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[21] Article 2.1 and 3.3

[22] clauses 4.2**,** 4.3.1, 4.3.2 and 5.2 of ID 1

[23] By application of CPD and in conformity with the mandate given by the Commission

- structural materials and constituent products with properties to be determined by testing, and

- prefabricated structural components and kits consisting of structural components with properties to be calculated according to EN Eurocode methods.

3.2 Indications to writers of hENs and ETAs for structural material and constituent products with properties to be determined by testing

3.2.1. For structural materials and constituent products, with properties which enter into structural calculations of works or otherwise relate to their mechanical resistance and stability and/or fire resistance including aspects of durability and serviceability, material hENs and ETAs shall meet the following:

- Material hENs and ETAs shall take the technical requirements of the EN Eurocodes into account so that the assumptions of design according to the EN Eurocodes are met. This applies in particular to the general principles and requirements given in EN 1990, Basis of structural design, e.g. with regard to the definition of values of material or product properties such as the characteristic value[24]

- Material hENs and ETAs will, therefore, have to lay down the methods for determining these properties and to specify the requirements for the factory production control and for the conformity attestation in such a way that each declared value or declared class corresponds, as far as practicable, to a defined statistical confidence (defined fractile and confidence level) and can, for the structural design of works, be taken as the “characteristic value”.

- In order to take into account "possible differences in geographical or climatic conditions or in ways of life, as well as different levels of protection that prevail at national, regional or local level" in the sense of Art. 3.2 of the CPD[7], levels and classes[9] may have to be established in the material hENs and ETAs, in accordance with Guidance Papers E and F, taking into account the established competence of the Member States concerning the levels of safety, including aspects of durability and economy. The Member States may then choose the levels and classes to be observed in their territory.

Note: Harmonised specifications shall not exclude from the market products legally in use in at least one Member State. Therefore, materials hENs or ETAs may include specific provisions deviating from the EN Eurocode provisions, provided that the declared values remain usable for the design of construction works, according to the EN Eurocodes.

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[24] EN 1990, § 1.5.4.1 defines the *characteristic values* as *"Value of a material or product property having a prescribed probability of not being attained in a hypothetical unlimited test series. This value generally corresponds to a specific fractile of the assumed statistical distribution of the particular property of the material or product. A nominal value is used as the characteristic value in some circumstances"*. However, often, the characteristic value takes also the confidence level into account.

3.2.2. When making provisions in material hENs or ETAs which determine the declared values or classes, CEN product TCs and EOTA WGs should be aware that:

- Uncertainties concerning declared values of "structural materials and products" will, in design calculations according to the EN Eurocodes, be allowed for by material partial safety factors,

- The value or class of a property or performance of a "structural material or constituent product", which is needed in the design of works and parts thereof (and is consequently important for the competitiveness of that material or product) will not be the declared characteristic value or class but the design value[25].

- Deciding on the safety factors, including the material partial factors, which are used to determine the design value from the characteristic value[24], remains the responsibility of Member States.

3.2.3. All of the provisions concerning the CE marking and the accompanying information on the properties of a product or material shall be given in the relevant hEN or ETA, in accordance with the mandates and the guidance papers of the Commission.

3.2.4. For material properties needed for the structural design of works, and that are linked to the Essential Requirements, the material hEN or ETA shall provide that all of their values or classes, relevant for the calculation or the design assumptions of the EN Eurocodes, are declared in the information accompanying the CE marking.

If one of those properties, for which values or classes have to be declared, is missing in the mandate, the CEN/TC or EOTA/WG shall inform the Commission so that the corresponding mandate can, if justified, be amended and, if needed, transitional arrangements can be made to enable the hEN, or ETA to be published without delay.

3.2.5. Provisions made in 3.2.1 to 3.2.4 with regard to ETAs shall also be taken into account by EOTA in the preparation of the ETA Guidelines (ETAGs), as appropriate.

3.3 Indications to writers of hENs and ETAs for structural components and kits with properties to be determined according to EN Eurocodes[26]

3.3.1. Introduction

The hENs and ETAs for structural components or kits, hereinafter referred to as "component hENs and ETAs", shall provide for one, or several, or all[27], of the

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[25] According to EN1990, § 1.5.4.2 and 1.6, the *design value* of a material or product property is defined as *"value obtained by dividing the characteristic value by a partial factor* γ_m *(for material property) or* γ_M *(for material property also accounting for model uncertainties and dimensional variation) or, in special circumstances, by direct determination"*

[26] Properties of structural components and kits can also be determined by testing. The methods to be applied are those which will be given in the hEN or ETA for the structural component or kit concerned.

following methods to determine the properties relating to the essential requirements N°1"mechanical resistance and stability" (including such aspects of Essential Requirement n°4 Safety in use, which relate to mechanical resistance and stability) and aspects of Essential Requirement n°2 "resistance to fire", to be declared as information accompanying the CE marking:

– Method 1: Indication of geometrical data of the component and of properties of the materials and constituent products used, according to 3.3.2.

– Method 2: Determination of properties by means of the EN Eurocodes (with the results expressed as characteristic values or design values) according to 3.3.3

– Method 3: Reference to design documents of the works or client's order according to 3.3.4.

CE marking and the accompanying documents for such a product shall provide all of the information necessary to use the product in works, or to integrate the product characteristics into the structural design of works or parts thereof.

Products that have declared values determined according to EN Eurocode calculation methods, following the harmonised technical specifications, and that are CE marked on this basis, must be allowed to be placed on the market and used for the purpose for which they are intended in all Member States (see CPD article 6.1).

3.3.2. Method 1

The component hEN or ETA provides that the CE marking shall be accompanied by the following information:

– the geometrical data (dimensions and cross sections, including tolerances) of the structural component or, in the case of kits, of the installed system and the components of the kit, and

– the properties of the materials and constituent products used[28] that are needed to determine, according to the National Provisions, valid in the place of use, or possible use, load-bearing capacities and other properties, including aspects of durability and serviceability, of the structural component (or, in the case of kits, of the assembled system) installed in the works - see 3.3.3 (f)

The adequacy of the respective provisions should be verified in consultation with CEN/TC 250.

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[27] For a given product, one or several properties can be subject to one of these methods, and other properties can be subject to another of these methods

[28] The properties of the materials and constituent products used should be indicated by reference to the respective product specification.

It is intended that examples for the application of method 1, and examples of CE marking, developed by product CEN/TCs or EOTA/WGs, will be made publicly available by the Commission services, in their web-site.

3.3.3. Method 2

The component hEN or ETA uses EN Eurocode methods as the means of determining the properties of the structural component or kits relating to the essential requirements “mechanical resistance and stability” or “resistance to fire” in terms of characteristic values or design values, taking into account the following:

3.3.3.1. General

(a) Component hENs, and ETAs shall comply with the principles and requirements given in EN 1990 Basis of structural design e.g. with regard to the definition of values of material or product properties such as the characteristic value[24] and the design value[25]. Thus component hENs and ETAs will have to:

– define the properties of structural components and kits, which relate to "mechanical resistance and stability" or "resistance to fire" that are to be used in the structural design of works, and

– lay down the methods for determining those properties and specify the requirements for the factory production control and for the conformity attestation,

in such a way that each declared value or declared class corresponds, as far as practicable, to a defined statistical confidence (defined fractile and confidence level) and can, for the structural design of works, be taken as the “characteristic value” or “design value”.

(b) Component hENs, and ETAs shall use the methods given in the specific EN Eurocodes, as far as applicable.

The adequacy of the provisions of components hENs and ETAs concerning the indication of properties related to mechanical resistance and stability and resistance to fire should be verified in consultation with CEN/TC 250.

Nevertheless, harmonised specifications shall not exclude from the market products legally in use in at least one Member State. Therefore, a component hEN or ETA may include specific provisions deviating from the EN Eurocode provisions, provided that the component or, in the case of kits, the assembled system, remains usable for works designed according to EN Eurocodes.

Note: EN Eurocode methods referred to in hENs and ETAs have the same status as a test method described in a supporting standard and referred to in an hEN or ETA. By use of a reference, the respective EN Eurocode clauses become part of the harmonised product specification.

(c) Component hENs and ETAs shall take into account the established competence of the Member States concerning the levels of safety, including aspects of durability

and economy[29], and of country specific data related to "differences in geographical or climatic conditions or in ways of life or different levels of protection that prevail at National, regional or local level" in the sense of Art. 3.2 of the CPD[7] For this purpose, appropriate levels and classes[9], which give the possibility of national choices for the respective parameters and which can be referred to in the National Provisions, may have to be given in the component hENs and ETAs, taking into account the relevant Nationally Determined Parameters.

With respect to these levels and classes, Guidance Paper E applies with the provisions concerning threshold levels (section 3; minimum/maximum values), classes of product performance (section 4) and possible National requirements concerning levels of product performances (section 5). As structural components and kits are prefabricated (parts of) works bearing the CE marking according to the CPD, also section 2 of Guidance Paper E applies. The levels and classes should be presented in such a way that the Member States' choice is not predetermined (e.g. by the name given to a certain level or class).

Member States are encouraged to co-operate to minimise the number of classes and levels to be introduced in hENs and ETAs by specification writers for "structural components and kits"

(d) As far as durability is concerned, Guidance Paper F on durability applies also to structural components or kits and their properties related to the Essential Requirements "mechanical resistance and stability" or "resistance to fire". For parameters that have an influence on the durability of the works, the Component hENs and ETAs shall also give the possibility for national choices by means of levels or classes according to Guidance Paper E.

(e) The use of EN Eurocode provisions in component hENs and ETAs taking the Nationally Determined Parameters into account in the component hEN or ETA by appropriate levels and classes, if relevant (see 3.3.3.2, note 2), may be done by:

- Referring, in the component hEN or ETA, to the respective EN Eurocode Part(s) indicating the relevant sections or clauses (this method is preferred), or

- Incorporating the respective EN Eurocode provisions in the component hEN, or ETA, where necessary with appropriate adaptation or simplification,

(f) Component hENs and ETAs should specify the materials and constituent products to be used by referring to the respective product hEN[30] or ETAs (for transitional arrangements, see 3.3.3.3). This applies to any material or constituent product,

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[29] which includes the aspects of serviceability in the sense of EN Eurocodes

[30] In specific cases, to be identified by the Commission and Member States, component hENs or ETAs may refer to European product standards which do not, or not yet, have the status of harmonised standard in the sense of the CPD, for instance EN 206 "concrete".

which is to be considered as a construction product in the sense of the CPD and the properties of which:

– enter into the calculation of properties of the structural component or kit, by the characteristic value, or

– relate indirectly to the mechanical resistance and stability of the works, in particular with regard to durability aspects[31], even if they do not enter into the calculation.

(g) All rules related to the CE Marking and the accompanying information on the properties of structural components or kits must be given, with the details necessary for the application by the manufacturers, in the component hEN or ETA, in application of the mandate given by the Commission and in accordance with Guidance Paper D.

The provisions concerning the "indications to identify the characteristics of the product" and the "guidance to specification writers regarding the identification of product characteristics" (clauses 3.6 and 4 of Guidance Paper D) apply also to properties related to the essential requirements "mechanical resistance and stability" and "resistance to fire". Thus, the hEN or ETA shall provide that the information accompanying the CE marking of a structural component or kit, shall include the levels or classes of the properties related to the essential requirements “mechanical resistance and stability” and “resistance to fire”, expressed in terms of declared values or declared classes, including the design assumptions used by the manufacturer. It will be up to the manufacturer of such prefabricated parts of works to choose, in each case, levels and classes according to the intended use (see 3.3.3.1 (c) and (d) as well as 3.3.3.2).

(h) When making provisions in hENs or ETAs for structural components or kits that determine the declared values or classes, CEN product TCs and EOTA bodies should be aware that:

– the values or classes of performance of the structural component or kit, which are essential for the design of works (and, consequently, for the competitiveness of the structural component or kit) will not be the characteristic values but the design values;

– uncertainties concerning declared values or classes of the CE-marked structural component or kit will, according to the EN Eurocodes (but also according to the prevailing national design rules), be taken into account in calculations of the works by material partial factors applicable to the structural component or, in the case of a kit, to the installed system;

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[31] e.g. concrete admixtures, possibly having a negative effect concerning corrosion of reinforcing steel, aggregates possibly leading to alkali-silica reaction, or structural steel which, depending on its composition, could be more or less sensitive to corrosion, or fire protection materials to reduce temperature of structural products

– laying down the material partial factors, applicable to the structural component or, in the case of a kit, to the installed system, remains the responsibility of the Member States.

3.3.3.2. Expression of properties related to "mechanical resistance and stability" and "resistance to fire"

The properties related to "mechanical resistance and stability" and "resistance to fire" and the information accompanying the CE marking should be specified in component hENs or ETAs as simply as possible with regard to the needs of fulfilling the National Provisions. This may be done by expressing the properties in terms of:

(a) characteristic values for strength and other cross section properties from which the load-bearing capacities and other aspects[32] of the structural component (or, in the case of kits, of the assembled system) installed in the works, taking into account the National Provisions, can be calculated, or

(b) design values provided that the NDPs applicable to works have been taken into account by

- appropriate levels and classes, which correspond to sets of NDPs (see 2.1.2 to 2.1.5 and 2.2.2), or

- values for the NDPs given in the National Annexes of the Eurocodes.

If a National annex has not been elaborated the recommended values provided by the relevant parts of EN Eurocode Parts are applicable.

The product hEN(s) or ETA(s) should also consider the case in which a Member State, instead of setting up its own NDPs, has adopted the respective values, classes and/or methods recommended in the EN Eurocode part(s) concerned.

Note 1: To express a property of a structural component or kit by the "design value" involves that the set of NDPs, which are applicable to the component or kit in the end use conditions, are expressed in the hEN or ETA in terms of classes.
For this purpose, the classes will be defined in component hEN or ETA by the combination of NDPs applicable in Member States.
Normally, for a given structural component or kit and its intended use:
- *. a number of symbols, classes or alternative methods, which in EN Eurocodes have the status of NDPs, will not be relevant, and*
- *. the relevant NDPs will not always be different from one Member State to the other.*

This means that, in most cases, a reduced number of classes, in the component hEN or ETA will be sufficient to cover the NDPs and the differences of NDPs in the various Member States, applicable to the component or kit.
Note 2: Eventually, in particular cases, it may happen for a given component or kit that there is just one set of NDPs to be taken into account in the component hEN or ETA, which covers the end use conditions in all the Member States.

[32] for instance *thermal insulation*, for fire separating elements

It is intended that examples for the application of method 2, and examples of CE marking, developed by product CEN/TCs or EOTA/WGs, will be made publicly available by the Commission services, in their web-site.

3.3.3.3. Transitional arrangements

The following transitional arrangements shall be taken into account in the drafting of component hENs or ETAs:

- For the period of time in which the respective EN Eurocodes are not yet available and, thus, cannot be referred to in the Component hEN or ETA or used by manufacturers of the structural component or kit, it is recommended to refer to[33], or to incorporate, as far as practicable, the relevant EN Eurocode provisions, in their latest version in consultation with CEN/TC 250. These provisions shall be replaced by references to the respective EN Eurocodes, when these become available.

- For the period of time in which the relevant material hENs, or ETAs, are not yet available and, thus, cannot be referred to in the component hEN or ETA, or used by manufacturers of structural components or kits, it is recommended to incorporate, as far as practicable, the material or product specification in the component hEN or ETA (preferably in Annexes), in consultation with the respective material TCs/WGs,[34]

Provisions in component hENs or ETAs for such transitional arrangements will be necessary until the co-existence periods relating the respective materials and constituent products have come to their end. For further information on "Transitional Arrangements" applicable to hENs and ETAs for materials and constituent products, see Guidance Paper J.

3.3.4. Method 3

(a) For cases in which a structural component or kit is produced in accordance with the design details (drawings, material specifications, etc.) prepared by the designer of the works[35] following the National Provisions, component hENs or ETAs shall provide, where relevant, that the information to accompany the CE marking with regard to the product properties can be given by making reference, in an unambiguous way, to the respective design documents of the works.

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[33] Reference can only be made to documents, which are publicly available.

[34] In most cases, such a preliminary harmonisation of the structural materials or constituent products used will not be practicable. Eventually, further mandates for hENs or ETAGs, or green light for an ETAs without guideline could be provided for by the European Commission.

[35] or the designer of the concerned part of the works

(b) For cases in which the producer has designed and produced a structural component or kit following the provisions of the client's order, in accordance with the National Provisions applicable to the works, the component hEN or ETA shall provide, where relevant, that the information to accompany the CE marking with regard to the product properties can be given by making reference, in an unambiguous way, to the drawings and material specifications linked to the client's order.

3.3.5. Attestation of conformity

Concerning the conformity attestation of structural components and kits, as of any other construction product, all of the tests and procedures shall be performed and documented according to the provisions of the CPD to be transposed into the technical specification of the product (see Guidance Paper K, clause 2.4).

Therefore, component hENs or ETAs shall contain the necessary provisions to define the tasks of the manufacturer and the Notified Bodies with regard to the attestation of conformity of the product.

Properties of a structural component or kit, which relate to "mechanical resistance and stability" and "fire safety" and which are determined by calculation, are subject to the procedure of attestation of conformity, as is any other property.

Within the systems of attestation of conformity referred to in Annex III of the CPD, in the case of method 2, the checking of calculations shall be considered as a part of the "initial type testing" of the product.

3.3.6. Application to ETAs

Provisions made in 3.3.2 to 3.3.5 with regard to ETAs should also be taken into account by EOTA in the preparation of the ETA Guidelines (ETAGs), as appropriate.

Part 4:
Future actions related to the Eurocode Programme

4.1 Education

4.1.1. To build on the strong pedigree of the EN Eurocodes described above, the Commission recognises the importance of building on this with programmes of education to help the professions to implement the EN Eurocodes.

4.1.2. Aspects of education that need to be covered, include:

- informing and making the profession as a whole aware of the EN Eurocodes
- providing continuing professional development and training to the profession
- encouraging the production of handbooks, design aids, software etc to facilitate the implementation of the EN Eurocodes
- encouraging Universities and Technical Colleges to base their teaching of civil and structural engineering design on the EN Eurocodes

4.1.3 The Commission, in liaison with industry and Member States, will encourage:

- Publication of easily understandable "jargon free" booklets covering the EN Eurocodes;
- The holding of European seminars aimed at the profession as a whole as key EN Eurocodes become available as ENs (e.g. EN 1990:Basis of Design);
- Publication of documents on the adoption of the EN Eurocodes through Government or on behalf of Government
- The holding of meetings organised by professional and industry bodies to inform construction professionals and university teachers, to listen to and discuss their concerns, and to promote the opportunities offered by the EN Eurocodes.
- The arrangement of continuing professional development and training courses
- The development of aids to implementation

4.1.4 Central to any initiatives taken on education is the production of :

- Handbooks, worked examples and background documents;

– Software;

– Guides for everyday structures (e.g. normal buildings) based on the EN Eurocodes

– Publishing companies, software houses and trade organisations will carry out these important activities, mainly as commercial ventures. Encouragement to these bodies can be given by a strong commitment to implementation of the EN Eurocodes both by the EC and the Member States.

4.1.5 Member States should encourage the use of the EN Eurocodes in private contracts, particularly through education and information campaigns, regardless of what may be requested by National provisions.

4.2. Research with regard to EN Eurocodes

4.2.1. The Commission services recognises that, for the Construction sector to remain competitive in the world construction industry, it is essential that the EN Eurocodes, once published, should remain the most up to date, useable International Codes of Practice, meeting the requirements for a profession practising in a competitive environment.

4.2.2. The EN Eurocodes should be able to develop according to the innovative pressures of the market and the progress of scientific knowledge and methods.

4.2.3. The pressures from the market are generated by:

– new material and new products;

– new ways for procurement and execution of works;

– needs for economy whilst maintaining acceptable levels of safety.

The progress of the scientific knowledge and methods are generated by:

– the need to avoid disasters in the area of safety (eg seismic, fire);

– a knowledge of phenomena acquired in other domains (eg aeronautics for wind action);

– the answer to new economic or social needs (eg High Speed Railways, nuclear plants);

– the availability of powerful and widely-distributed tools for calculation (computers and software).

4.2.4. Initiatives for research arise from

– the industry or the users concerned;

– public authorities in charge of safety, economy, scientific development and education (for example, the development of NDPs)

– universities and research organisations experienced from their involvement as third parties.

4.2.5. In many cases there will be a mutual interest for both industry and public authorities (including the European Commission) in research and this should be reflected by agreements on common funding according to the following criteria:

– Industrial and user's sources - the main funding for research whose objectives are short-term benefits or particular advantages for special innovative companies and associated industries and users (e.g. unique verifications and ETA's).

– EC or National public funding - the main funding for research whose objectives are medium to long term benefits for the European construction industry (e.g. for improving technical specifications and design codes, harmonising models for actions and resistances, improving safety aspects).

4.3. Maintenance of EN Eurocodes

4.3.1. The maintenance of the EN Eurocodes is essential; the need for updating, revision and completion is strongly recognisedso that an improved second generation of EN Eurocodes can evolve. However, a period of stability should be observed before embarking on change[36] other than to correct errors.

4.3.2. Maintenance work will involve:

– Reducing open choices (NDPs)

– urgent matters of health and safety;

– correcting errors;

– ensuring the most up to date information is in the EN Eurocodes, recognising recent proven innovations and improvements in construction technology;

– feedback from use of the EN Eurocodes in the various Member States through CEN;

– requests from industrial organisations or public authorities to CEN members for revision.

4.3.3. The organisation of maintenance should start after the receipt of a positive vote on a draft EN Eurocode, a Maintenance Group should be formed by the relevant CEN/TC250 SC to:

– give further consideration of co-ordination items arising from the work of other Project Teams (this is necessary as the various parts of the EN Eurocodes are not being prepared simultaneously);

[36] No revision should be published until after the coexistence period has finished.

– provide explanations to questions arising from the use of the EN Eurocode, e.g. on background and interpretation of rules;

– collect comments and requests for amendment;

– prepare action plans for urgent revision in the case of safety related matters, or future systematic revisions according to the CEN procedure and as decided by CEN/TC250.

4.3.4. The strategy to provide adequate resources to support the maintenance of the EN Eurocodes should be decided by the European Commission, Member States, Industry and CEN seeking to find a balance between:

– the requirements for public safety

– the competitive demands of industry

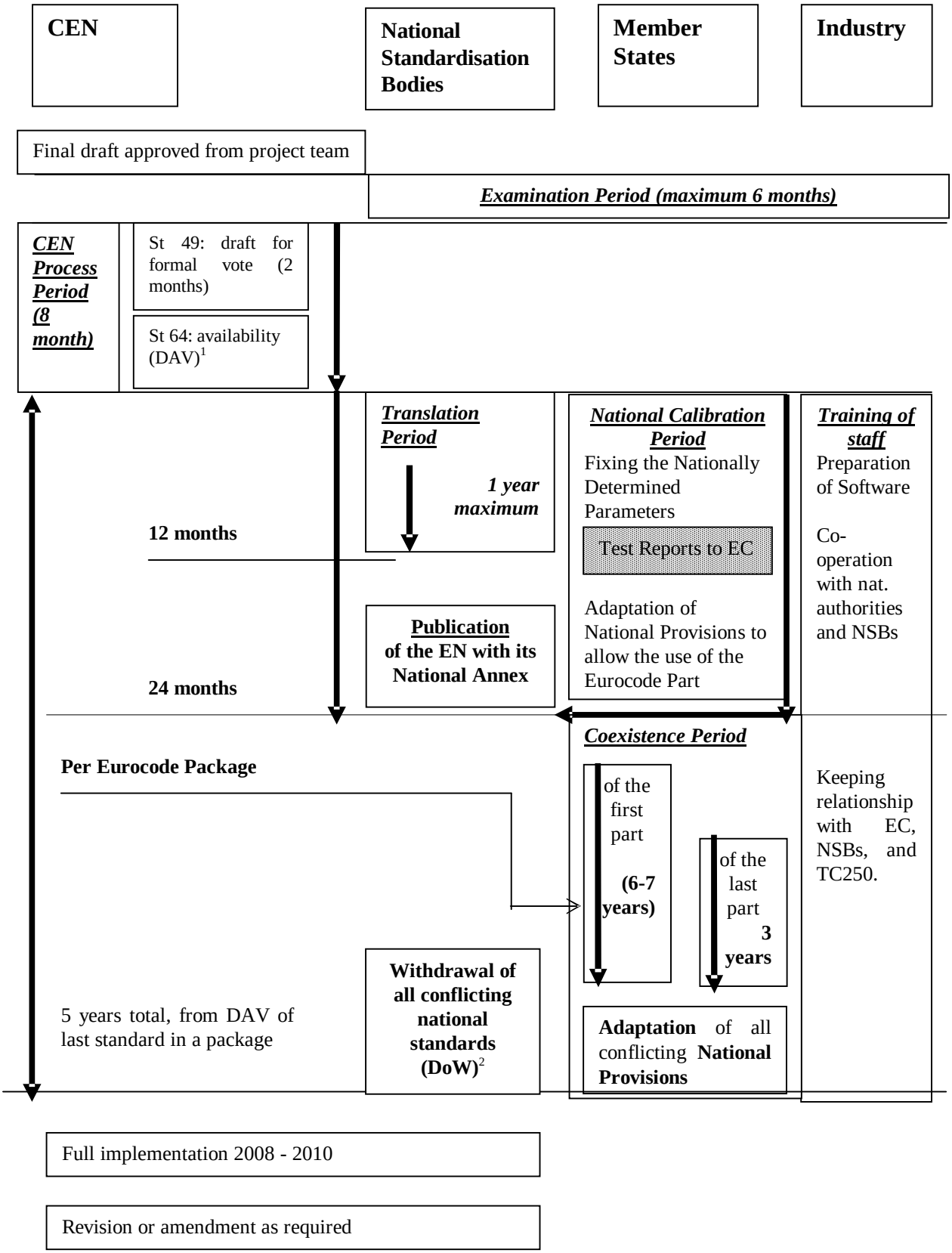
– the availability of funds

Annex A

Arrangements for the implementation of the EN Eurocodes

Periods	Description	Action
Examination Period	After the final draft prepared by the Project Team is sent to the sub-committee for progressing to the vote, a period should be allowed for examination of the content of the Eurocode Part, by both competent authorities and Sub-committee members. After taking into account any comments generated from this examination, the Sub-committee approves the document to go to formal vote and sends it to CEN/MC (CEN stage 49). A maximum period for the examination, revision in the sub-committee and final approval to go to formal vote is 6 months.	CEN/ NSBs
CEN Process Period	After receiving the final draft (CEN stage 49), CEN/MC organises the formal vote and the ratification, leading to the date of availability (DAV) of the approved European standard. This process requires about 8 months, depending on editing, translation (translation of the EN Eurocode Parts to the other two official languages of CEN) and finalisation of the document prior to making it available to CEN members for publication	CEN/ NSBs
Translation Period	The translation of an Eurocode Part in authorised national languages may be started, at the latest when the National Standardisation Bodies have received the Eurocode from CEN (DAV). The maximum time allowed for translation is 12 months after DAV.	NSBs
National Calibration Period (in parallel with translation period)	A period of two (2) years after DAV is the maximum time allowed to fix the Nationally Determined Parameters. The SCC could, however, examine requests, for exceptions. At the end of this period, the national version of an EN Eurocode Part will be published, with the National Annex, which will include the Nationally Determined Parameters. At the end of this 2-year period, the Member States should have adapted their National Provisions so that this Eurocode Part can be used on their territory. The National Annex shall be sent to the EC services for information (see 2.5.6). During this period, the Member States shall inform the Commission about the result of the tests undertaken using this EN Eurocode Part (see 2.5.6 and Annex B).	MSs/ NSBs
Coexistence Period of a Eurocode Package	During the coexistence period, which starts at the end of the National Calibration period, the Eurocode Part can be used, just as the former national system (codes and provisions) can also be used. The coexistence period of an Eurocode Package will last up to a maximum time of three (3) years after the national publication of the last Part of a Package. At the end of the coexistence period of a Package, the NSBs shall withdraw all conflicting national standards, and the Member States shall make sure that all the Parts of the related Package can be used without ambiguity on their territories by adapting their National Provisions as necessary. Thus all conflicting National Standards[37] in a package should be withdrawn a maximum of 5 years after DAV of the last available standard in the package (see 2.5.5)	MS/ NSBs/ Industry

[37] The words "conflicting National Standards" mean standards whose scope covers the same subjects as those of the EN Eurocode Parts



1. DAV = Date of availability
2. DoW = Date of withdrawal of conflicting National Standard

Annex B

Items to be considered for the report on the EN Eurocode trial use

Note: Keep answers as short as possible; do not add the calculations and drawings themselves.

A Title of the report: Include SUBJECT, MATERIAL, COUNTRY

B Basic Information

Subject of report
Date of report
Author(s)
EN Eurocodes(s) used
Calibration study or design
Any National Code (or ENV Eurocode, with its NAD) used for comparison
Executive summary of work and results obtained

C Description of the structure(s) designed

Type of the construction works; is it an existing one, or new build?
Include small-scale figures to illustrate the construction works

D1. The design (or the checking) of the structure using national codes and standards

D1.1 The national codes and standards used:

1. Basis for the design
2. Actions
3. Materials

D1.2 Summary of the design checking operations

D1.3 Results

D2. The design (or the checking) of the structure using EN Eurocodes

D2.1 Which EN Eurocode Part used? List of NDPs and values or classes or alternatives methods used where NDPs are identified in the EN Eurocode Part.

D2.2 Summary of the design checking operations

D2.3 Results

E Comparison between the two calculations (if relevant)

F Observations on use of EN Eurocodes

Usability
Understandability
Clarity
Conciseness
Omissions
Level of complexity
Relative time to do calculations compared with National Code
Overall impression of EN Eurocode(s)

Annex C

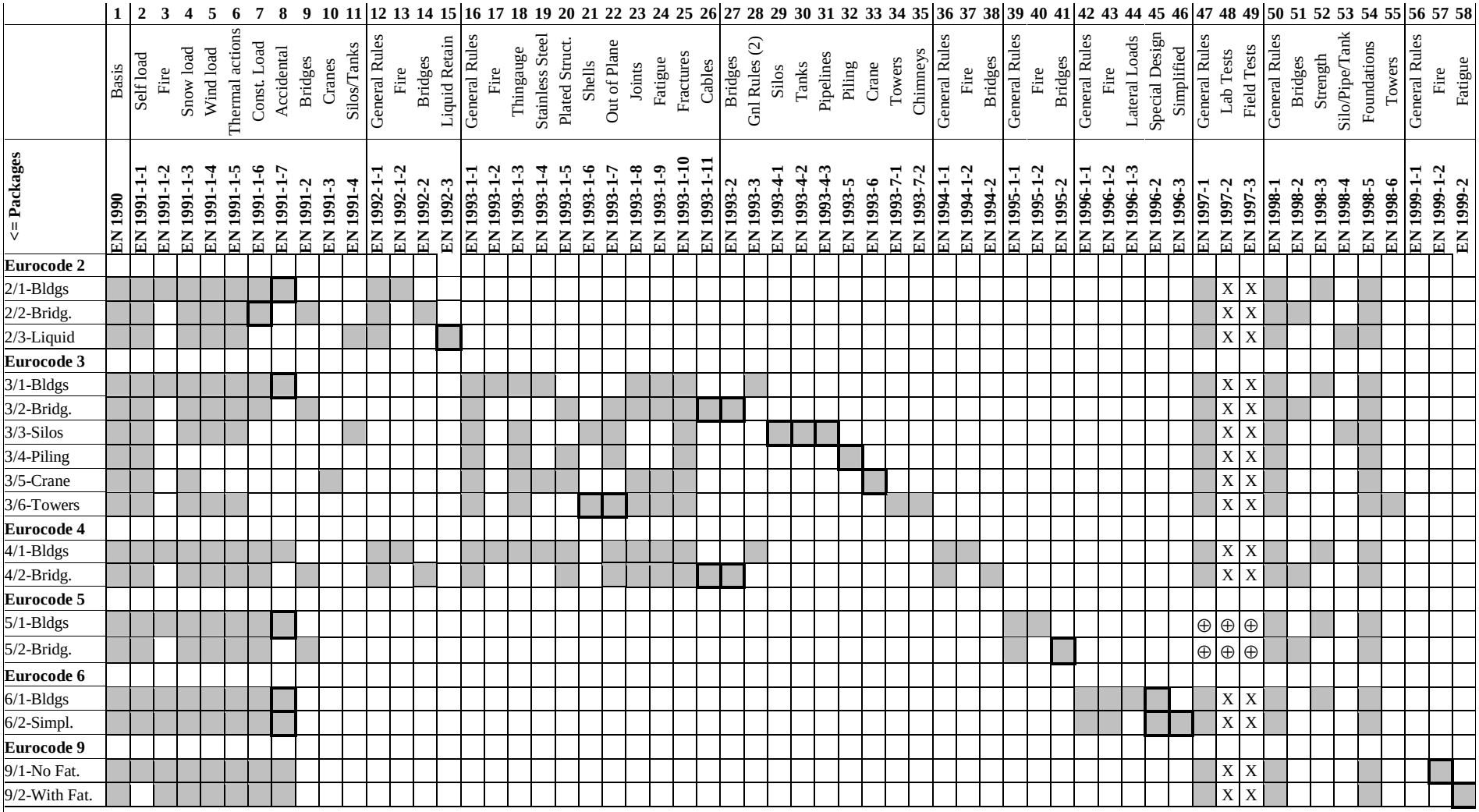
Packaging of the EN EUROCODE Parts

(According to the actual understanding of CEN)[38]

Eurocode 2: Concrete Structures	
Package 2/1	Building and Civil Engineering Structures, excluding bridges and liquid retaining and containment structures.
Package 2/2	Bridges.
Package 2/3	Liquid retaining and containment structures.
Eurocode 3: Steel Structures	
Package 3/1	Building and Civil Engineering Structures, excluding bridges, silos, tanks and pipelines, steel piling, crane supporting structures, and towers and masts.
Package 3/2	Bridges.
Package 3/3	Silos, tanks and pipelines.
Package 3/4	Steel piling.
Package 3/5	Crane supporting structures.
Package 3/6	Towers and Masts.
Eurocode 4: Composite Steel and Concrete Structures	
Package 4/1	Building and Civil Engineering Structures, excluding bridges.
Package 4/2	Bridges.
Eurocode 5: Timber Structures	
Package 5/1	Buildings and Civil Engineering Structures, excluding bridges.
Package 5/2	Bridges.
Eurocode 6 : Masonry Structures	
Package 6/1	Building and Civil Engineering Structures, excluding bridges.
Package 6/2	Simplified design.
Eurocode 9 : Aluminium	
Package 9/1	All without fatigue.
Package 9/2	With fatigue.

- Eurocode Parts from EN 1990, 1991, 1997 and 1998 do not appear as Packages, but are necessary parts of the Eurocode packages for design with particular materials, described above.
- Where a Eurocode Part appears in more than one Package, the DoW for that Part is the same as that for the Package with the DoW furthest in the future.

[38] This list should be up-dated by CEN as appropriate


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58
Basis
Self load
Fire
Snow load
Wind load
Thermal actions
Const. Load
Accidental
Bridges
Cranes
Silos/Tanks
General Rules
Fire
Bridges
Liquid Retain
General Rules
Fire
Thingauge
Stainless Steel
Plated Struct.
Shells
Out of Plane
Joints
Fatigue
Fractures
Cables
Bridges
Gnl Rules (2)
Silos
Tanks
Pipelines
Piling
Crane
Towers
Chimneys
General Rules
Fire
Bridges
General Rules
Fire
Bridges
General Rules
Fire
Lateral Loads
Special Design
Simplified
General Rules
Lab Tests
Field Tests
General Rules
Bridges
Strength
Silo/Pipe/Tank
Foundations
Towers
General Rules
Fire
Fatigue
<= Packages
EN 1990
EN 1991-1-1
EN 1991-1-2
EN 1991-1-3
EN 1991-1-4
EN 1991-1-5
EN 1991-1-6
EN 1991-1-7
EN 1991-2
EN 1991-3
EN 1991-4
EN 1992-1-1
EN 1992-1-2
EN 1992-2
EN 1992-3
EN 1993-1-1
EN 1993-1-2
EN 1993-1-3
EN 1993-1-4
EN 1993-1-5
EN 1993-1-6
EN 1993-1-7
EN 1993-1-8
EN 1993-1-9
EN 1993-1-10
EN 1993-1-11
EN 1993-2
EN 1993-3
EN 1993-4-1
EN 1993-4-2
EN 1993-4-3
EN 1993-5
EN 1993-6
EN 1993-7-1
EN 1993-7-2
EN 1994-1-1
EN 1994-1-2
EN 1994-2
EN 1995-1-1
EN 1995-1-2
EN 1995-2
EN 1996-1-1
EN 1996-1-2
EN 1996-1-3
EN 1996-2
EN 1996-3
EN 1997-1
EN 1997-2
EN 1997-3
EN 1998-1
EN 1998-2
EN 1998-3
EN 1998-4
EN 1998-5
EN 1998-6
EN 1999-1-1
EN 1999-1-2
EN 1999-2
Eurocode 2
2/1-Bldgs
2/2-Bridg.
2/3-Liquid
Eurocode 3
3/1-Bldgs
3/2-Bridg.
3/3-Silos
3/4-Piling
3/5-Crane
3/6-Towers
Eurocode 4
4/1-Bldgs
4/2-Bridg.
Eurocode 5
5/1-Bldgs
5/2-Bridg.
Eurocode 6
6/1-Bldgs
6/2-Simpl.
Eurocode 9
9/1-No Fat.
9/2-With Fat.
Latest completion of a Package
X
EN 1997 Parts 2 and 3 will be available during the period of National Examination or co-existence of the other parts; their availability Does not however need to affect the start of these periods of National Examination or co-existence
⊕ Foundations for timber structures are designed using packages other than 5/1 or 5/2

EUROPEAN COMMISSION
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL

Chemicals and construction
Construction

4 May 2005

GUIDANCE PAPER M

(concerning Council Directive - 89/106/EEC (CPD))

CONFORMITY ASSESSMENT*) UNDER THE CPD: Initial type-testing and Factory production control

(*final text April 2005*)

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.

*) This is the term introduced by the European Commission Guide to the implementation of directives based on the New Approach and the Global Approach (2000), the so-called "Blue Guide". Other Guidance Papers and many technical specifications (harmonised European standards and European Technical Approvals) use instead the term **"evaluation of conformity"**.

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GUIDANCE PAPER M

CONFORMITY ASSESSMENT*) UNDER THE CPD: Initial type-testing and Factory production control

- This Guidance Paper was issued by the Construction Unit of the European Commission, following consultation of the Standing Committee on Construction at the 60th meeting on 26.10.2004, as document CONSTRUCT 04/657, and at the 61st meeting on 12.04.2005, as document CONSTRUCT 04/657 rev.1.

Acronyms used

AB: Approval Bodies (Bodies authorised by the Members States according to Article 10 of the CPD to issue European Technical Approvals)

AoC: Attestation of conformity according to Chapter V and Annex III of the CPD

CEN: European Committee of Standardisation (Comité Européen de Normalisation)

CEN/TC: Technical Committee of CEN

CENELEC: European Committee for Electrotechnical Standardization (Comité Européen de Normalisation de l'Electricité)

CPD: Council Directive 89/106/EEC (Construction Products Directive)

CUAP Common Understanding of Assessment Procedure for European Technical Approval without guideline (art. 9.2 of the CPD)

CWFT Classified Without the need for Further Testing

EC: European Commission Services

EEA: European Economic Area

EOTA: European Organisation for Technical Approvals

ETA: European Technical Approval (CPD Chapter III type of "technical specification")

ETAG: Guideline for European Technical Approval

FPC: Factory Production Control

GNB: Group of Notified Bodies

GNB-SG Sector Group of Notified Bodies

hEN: harmonised European Standard (CPD Chapter II type of "technical specification")

ITT: Initial Type Testing

NB: Notified Body (also called "Conformity Assessment Body" under other New Approach Directives), which have been designated by Members States for tasks to be carried out for the purpose of conformity assessment). According to the CPD, Notified Bodies include *certification bodies*, *inspection bodies* and *testing laboratories*,

NPD: No Performance Determined

OJEU	Official Journal of the European Union
TC	technical committee
WG	working group

1. Introduction

1.1. This Guidance paper addresses the issue of conformity assessment[1] within the context of the implementation of Council Directive 89/106/EEC[2] (hereafter referred to as the Construction Products Directive - CPD), as amended. Only aspects related to the immediate production of technical specifications are considered.

1.2. The Guidance Paper is intended for technical specification writers (CEN/CENELEC and EOTA), for consideration together with the respective mandates and provisions given therein. Furthermore, it may as well be of interest, for information purposes, to regulators and enforcement authorities within the European Economic Area (EEA), notified bodies and manufacturers, although the technical specifications, once available will contain all relevant detailed provisions applicable to a given product. In any case, unless it expressly states otherwise, the Guidance Paper must not be used for arrangements not covered by technical specifications. It takes account of the Communication of the Commission with regard to the interpretative documents of Directive 89/106/EEC[3].

1.3. Taking into account the experience collected during the elaboration and the implementation of the first harmonised technical specifications (hENs or ETAs), this document is intended to give the principles and layout which the specification writers starting to draft clauses on conformity assessment in new harmonised technical specifications should follow.

1.4. For the existing harmonised standards (hENs) and Guidelines for European Technical Approvals (ETAGs) whose reference has been published in the OJEU (part C) and which are already in force, specification writers should modify clauses to conform to the principles shown here when the technical specification comes up for 5-yearly review, or by earlier amendment. For those currently considered finalised but without the reference already published, they should do so without delay before the reference will be published in the OJEU. In both cases, in order not to delay the application of best feasible technical specifications, specification writers should decide what clauses have priority to be modified.

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1 Other Guidance Papers and many technical specifications (harmonised European standards and European Technical Approvals) also use instead the term “evaluation of conformity”.

2 OJ L 40, 11.2.1989

3 OJ C 62, 28.2.1994

2. General principles

2.1. All harmonised technical specifications under the CPD shall address "Conformity assessment", i.e. how it will be shown that the product conforms to the technical specification. This may be in the product hENs or ETAs[4] itself, or in another standard referred to by the product technical specification.
The Conformity assessment clause is needed to demonstrate, by **initial type testing**, that the product complies with the requirements of the technical specification and that the performance declarations represent the true behaviour of the product and, by **factory production control**[5], that the performance declarations based on initial type testing results remain valid for subsequent products. In addition, it has to ensure that the performances declared by different manufacturers for a certain characteristic are reliable and truly comparable, determined with an equivalent confidence level, and that they can be used to satisfy the required classes or levels on works (e.g. in national regulations).
When the Commission decision determining the AoC system to be applied foresees that the latter depends on the uses(s) of the product, the harmonised technical specification shall clearly specify which characteristics are concerned and the particular procedure to be used.

2.2. *Standards*:
The Conformity assessment clause of harmonised standards should contain a sub-clause entitled “General” dealing with general aspects and introducing the basic methods of evaluation, followed by a sub-clause “Initial type testing [or assessment]” identifying how the characteristics of the products are tested or assessed[6] (which may contain a section entitled “sampling”, identifying how products are selected for testing or assessment, if not included elsewhere), and a sub-clause “Factory production control”.
The distribution of the tasks of manufacturer and notified bodies linked to AoC, i.e. conformity assessment for CE marking, has to be specified in Annex ZA of harmonised standards, and not in the body of the text (e.g. "initial type testing shall be carried out", not "the third party test lab shall perform type testing")[7].

2.3. *ETAs*:
The corner stones, i.e. minimum requirements, of the AoC tasks of the manufacturer and notified bodies, including FPC requirements, are defined in the ETAGs or CUAP. They should be sufficiently explained there and also in the public part of ETAs, while these tasks and requirements are detailed and further developed for the particular manufacturer in the Control Plan which is part of the confidential files which the individual ETA is referring to.

---

[4] In the case of an ETA, the detailed tasks of conformity assessment are specified in the Control Plan which is part of the confidential files attached to the ETA. This means that, in this case, Initial type-testing takes into account approval testing without requiring the repetition of these tests.

[5] and, where required, by further testing.

[6] Although the term “initial type testing” is used, other methods of evaluation are possible, e.g. calculation or the use of tabulated data.

[7] although it is possible to require that "The manufacturer shall operate a factory production control system" as the CPD requires.

2.4. Any provisions on conformity assessment included in hEN or ETAG are equally binding for both manufacturers and any notified body. This means, for example, that where a hEN sets a minimum frequency of testing, no manufacturer can comply with the hEN by using a lower frequency and, equally, if his products fully conform to the hEN at the minimum frequency level, no notified body may oblige a manufacturer to use a higher frequency. For this reason, Conformity Assessment clauses need careful drafting, so as neither to disadvantage certain manufacturers who, for example, have sophisticated process control systems and may, therefore, be able to use low test or control frequencies, nor to reduce confidence levels to an extent which would cause genuine safety concerns. Moreover aspects related to Small and Medium Sized Entreprises (SMEs) should be taken into account when drafting provisions on conformity assessment (for ITT, see 4.4, 4.5 and 4.6 and for FPC see 5.11 and 5.12). For ETAs, a minimum frequency might be fixed in an ETAG or CUAP, while the real frequency is defined in the ETA.

3. Definitions

3.1. **Initial Type Testing (ITT):** the complete set of tests or other procedures (e.g. calculation) described in the technical specification, to determine the performance of samples of products representative of the product type, for the mandated characteristics (see Guidance Paper K).

3.2. **Product range:** group of products produced by one manufacturer for which the test results for one or more characteristics from any one product within the range are valid for all other products within this range.

3.3. **Previously existing data**: test results following the provisions of the product technical specification, obtained before it was in force (i.e.. the start of the co-existence period of a harmonised product standard or ETAG) and/or before the third party involved in attestation tasks was formally notified to the EC for the relevant attestation tasks included in the harmonised technical specification[8].

3.4. **Classified without the need for further testing (CWFT)**: a procedure by which the specific performance[9] of a product is initially demonstrated by testing, in such a way that manufacturers may refer to that performance without the need of further tests (other parameters e.g. density, may require testing and controlling). To be taken into account in the harmonised product specifications successful CWFT applications require an EC Decision.

3.5. **Conventionally accepted performance**: provisions presented or referred to in the technical specification that allows manufacturers to declare product performances

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[8] Any other result obtained according to any other technical specification (e.g. national standards or national approval) previously in use in specific countries is not necessarily accepted as previously existing data. To be accepted as previously existing data the test results need to comply with the requirements of the harmonised technical specification for which the reference has been published in Official Journal and which allow to CE mark the product.

[9] Currently applied to fire reaction, fire resistance and/or external fire performance

without the need to perform initial type tests, calculations, etc. Such provisions may be tabulated values, descriptive solutions and alike.

Note: In many cases, product property requirements (e.g. density) are the means to establish the right to use the provisions referred to in 3.4 and 3.5.

3.6. **Approval testing**: set of tests to determine product performances, as included in the Guideline for European Technical Approval (ETAG) or Common Understanding of Assessment Procedure (CUAP), to be performed by the Approval Body authorised to deliver ETAs for the product concerned or under its responsibility (by a Notified Body, a sub-contractor or the manufacturer testing under Approval Body witnessing).

3.7. **Conformity assessment linked to an ETA**. In the attestation of conformity procedure, a Notified Body performs all or part (with another body involved, according to the plan[10] which is part of the confidential files which the ETA is referring to) of the tasks linked to the conformity assessment and required in the ETA. The tests and assessments already performed by the Approval Body or under its responsibility when the ETA has been delivered are to be taken into consideration without a need to repeat them. Approval testing is usually to be considered as ITT as can the Approval Body's initial inspection of factory for the purpose of certification or declaration of conformity with regard to FPC. In this case the tasks undertaken by the Notified Body (or the manufacturer) usually only concern validation and the other aspects (e.g. audit testing or continuous surveillance of FPC, if relevant) of conformity assessment.

4. Initial type testing (ITT)

General

4.1. New Approach directives consider the manufacturer as responsible for designing and manufacturing a product[11] who must take all measures necessary to ensure that the manufacturing process assures compliance of the product, to affix CE marking to the product, to establish a technical documentation and to draw up the EC declaration of conformity.

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[10] control plan / accepted test plan prescribed by the Approval Body

[11] Guide to the implementation of directives based on the New Approach and the Global Approach, clause 3.1 *"The manufacturer is any natural or legal person who is responsible for designing and manufacturing a product with a view to placing it on the Community market under his own name"* and *"the manufacturer has sole and ultimate responsibility for the conformity of the product to the applicable directives, whether he designed and manufacture the product himself or he is considered as a manufacturer because the product is placed on the market under his name"*.
Regarding specifically the CPD, to this add the cases in which a structural component or kit is manufactured in accordance with the design details (drawings, material specifications, etc.) prepared by the designer of the works following national provisions, excluding the design from the manufacturer's factual responsibility.

4.2. For construction products subject to AoC with harmonised technical specifications, the CPD foresees that ITT can be used as a method of control of conformity when determining the procedures of attestation of conformity[12]. In practice this means that harmonised characteristics for which the manufacturer declares performances (see 4.3) are subject to ITT when the manufacturer first declares conformity with a hEN, even for products already placed on the market. In addition, the need to perform ITT applies to all characteristics included in a technical specification when the manufacturer claims conformity, unless the technical specification gives provisions (e.g. use of previously existing data, CWFT and conventionally accepted performance) to declare performances without performing tests.

4.3. In order to take into account existing regulations on products where performance(s) for one or more characteristics may not be required, due to the characteristic(s) for a given intended use that is/are not subject to regulation in the Member State(s) where the product is placed on the market, the NPD-option can always be used by manufacturers (according to the provisions of Guidance Paper E "Levels and classes" clause 4.11 and Guidance Paper D "CE marking" clause 3.6). In these cases, the use of phrases "where required" can be confusing and, therefore, should be avoided[13].

4.4. The term ITT is used to cover not only physical testing but also other means of demonstrating conformity, such as calculation[14], conventionally accepted performance or tabulated reference data. Even when using CWFT or conventionally accepted performances, the manufacturer may need to perform some tests (e.g. of density) to demonstrate that his product meets the definition of the product covered by such provisions. The need to do this, as well as which test method(s) is/are appropriate, has to be made clear in the technical specification.

Test and assessment methods

4.5. Specification writers have to ensure that the technical specification for ITT is explicit on the assessment method, i.e. on how samples are to be taken (either in the technical specification itself or by reference to a test or classification technical specification containing the information), how many specimens are to be tested, their dimensions and how they are to be mounted in the testing equipment.

4.6. Some technical specifications may provide little more than a harmonised list of test methods and permit manufacturers to declare whatever performance level the product achieves from the tests (or other assessments). Other technical specifications may set threshold values on some characteristics, or introduce classes (either as a result of the mandate or 'classes of convenience'). Any combination of these three provisions is acceptable, although CEN/TCs and EOTA/WGs have to follow the provisions of Guidance Paper E when setting levels and/or classes.

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[12] CPD article 13.3.b and Annex III

[13] Instead, the requirement clauses relating to harmonized characteristics could start with the text: "This characteristic shall be evaluated when subject to regulatory requirements in the Member State where the product is intended to be placed on the market. It also may be evaluated, when the product is intended to be placed on the market in a country without regulation for this characteristic."

[14] For ITT by calculation refer to Guidance Paper K, in particular point 3.4 and its Annex 3.

CEN/TCs and EOTA/WGs need to ensure that the hEN or ETAG/CUAP is explicit in stating what the compliance criteria are and how the test results are to be expressed. Technical specifications may require one of the following approaches:

- 'pass/fail' (in which case it is common, but not necessarily obligatory, to assume that all products tested 'pass'[15]),
- test results that are used to establish levels or classes that are declared (e.g. fire behaviour classes),
- that the manufacturer states the test result itself, a mean value, or a mean value plus a declared tolerance, according to what is required by the technical specification,
- a 'manufacturer's limiting value' (the value which all products have to meet or exceed in tests),
- other, statistical means of declaration (e.g. characteristic/design value, acceptable or limiting quality levels) [16].

4.7. In some cases, test methods for initial type testing take some time to produce test results upon which the manufacturer's declaration is based. Without further guidance, this might mean that products cannot be CE marked for being placed on the intended market(s). If this situation is likely to occur, the CEN/TC should consider other verification methods or propose proxy characteristics in their responses to the EC mandates.

A further possibility is for a product hEN to foresee a first compliance and verification according to an approach considered sufficient for resulting in a provisional permission, for a limited time, to place products on the market under defined and limited conditions, while full verification is undertaken. When this situation does occur, manufacturers have to initiate ITT well in advance of their intended placing onto the market of the product (e.g. in research and development step). Depending on the case, applying, where this is possible, article 4 (4) of the CPD, or an ETA, can also be an appropriate solution for such specific cases.

4.8. In some cases, a manufacturer might seek ITT results for series production (see 4.9.1 and 4.9.2) before he has established a production run and the product(s) is/are produced in more than just very limited quantities. Where this may happen, because it is not possible to perform normal sampling, the technical specification has to give specific rules related to how products are chosen for ITT, and how these results are then applied to later production.

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[15] e.g. concerning frost resistance requirements: "The product shall pass …"(requiring that, for example, 9 out of 10 products pass). Furthermore, 'pass/fail' requirements do not need to be met if the NPD option is made use of.

[16] Drafters may refer to ISO/TR 13425 "Guide for the selection of statistical methods for standardization and specification", or ISO 12491:1997 "Statistical methods for quality control of building materials and components" in order to find an appropriate statistical method, both for ITT and for FPC testing.

Distinct categories of production

4.9. Guidance on ITT taking into account different categories of production

4.9.1. *Conventional series production*:

Many products placed on the market are manufactured in large volumes of the same product made over time. As long as the product remains unchanged, there is no need to repeat the ITT, and neither technical specifications nor Notified Bodies need to seek to put 'lifetime' limits on ITT reports.

4.9.2. *Series production of products with varying properties*[17]:

In this case of products placed on the market, the technical specifications need to give consideration as to how to perform ITT, because although there is series production, the finished product has potentially different performances (e.g. due to different size). The technical specification shall be specific about whether every product/kit of different size, shape, strength, etc., has to be considered as a different product requiring all characteristics, not covered by a product range, to be initial type tested, or the technical specification shall contain provisions to reduce this testing burden (e.g. the concepts of product range and/or direct or extended application of test results).

If, for justified and accepted reasons[18], the CEN/TC or EOTA/WG is not able to find an appropriate solution to cover this production categories appropriately in the same hEN or ETAG/CUAP, CEN/TC or EOTA/WG may do so separately or at a later date (through an amendment of the published hEN or ETAG). In this case, hENs or ETAGs/CUAPs would have to clearly define and exclude from the scope this production category not covered.

4.9.3. *Individual (and non-series) production* (Article 13(5) of the CPD), insofar required to be CE marked[19]:

(In order to fall into this category, a product must fulfil both criteria, individual and non-series production.)

These are products of individual design that are ordered for and installed in one and the same known work. They should neither be part of a range of equal products, which is manufactured in series of the same kind combining usual components in the same way[20], nor should they and their field of application (e.g. dimensions, weight) be offered on the general initiative of the

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[17] Examples of 'series' products with varying properties are steel structures, where each product/kit is of a different size, shape and strength, and windows manufactured in a wide range, where many products are of the same design, but of different sizes.

[18] In such a case, the CEN/TC or EOTA WG should send to the Commission an amendment to its answer to the mandate, and the Commission will reply in writing whether this amendment is accepted or not.

[19] Article 1 (2) of the CPD defines construction products as those for incorporation in works, and Article 2 (1) refers to them being "placed on the market". Therefore, notwithstanding their responsibilities in this field, Member States are not obliged to take measures for applying CPD provisions and CE marking to building elements made on the works and to those construction products that are manufactured off the works but incorporated in them without beforehand having been placed on the market, i.e. directly by the manufacturer as part of a service comprising more than just manufacturing and delivering the product.

[20] often in automatically operating processes

manufacturer (e.g. by means of published catalogues or other ways of advertising).

Under these conditions, individual (and non-series) production comprises products that are:

– individually designed and manufactured, upon request and for specific purposes, needing to readjust the production machines for their manufacture in order to be used in the work concerned [21]; or

– custom-made for a specific order to obtain one or several end use performances different from products manufactured in series, even if produced according to the same manufacturing process/system design.

Note: According to Statement no. 2. for entry into the Minutes of the Council of 21 December 1988 "The Council and the Commission agree that where a product is intended for a single application, Member States may authorise the use thereof even if it does not comply with the provisions of the Directive" (but without CE marking). In this respect, single-application products are to be considered being those of individual (and non-series) production falling under the first indent above, and manufactured for one single specific case of application that requires one or several individual end use performances.

For individual (and non-series) production, with the exception mentioned hereafter, a declaration of conformity by the manufacturer on the basis of (a) initial type-testing by him that uses conventionally accepted methods of testing/determining performances, and (b) factory production control, is sufficient to attest the conformity with the technical specifications in question and to allow the product to be CE marked. This must not result in reduced performance with regard to the requirements laid down in the technical specifications. For the purpose of control and surveillance, this declaration of conformity should indicate the intended use and the work in which the product is to be incorporated.

In the case that technical specifications are drafted for products which have particularly important implications for health and safety, specification writers need to expressly include a related provision if they consider, for individual (and non-series) production, such a declaration of conformity by the manufacturer (i.e. AoC system 4) as insufficient with regard to these implications. If they do so, the technical specifications in question should contain specific provisions regarding ITT of products resulting from individual (and non-series) production for the performance(s) with important implications for health and safety that permit these products to be CE marked without disproportionate testing (see also 5.12 for FPC aspects).

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[21] A product which is manufactured using the same machines the same components and the same process of manufacture, but changing only the dimensions can generally not be considered as non-series product and, instead, falls under the category 4.11.2 *Series production of products with varying properties*.

Where specification writers consider it possible that technical specifications concern a type of product, for which Member States may authorise the use of single-application products that do not comply (see note above) or may otherwise lawfully regard products not falling under the scope of the directive (see footnote [18]), they should bear this in mind when drafting the technical specifications in question.

Reduction of ITT test costs[22]

4.10. Specification writers should consider using in a hEN or ETAG/CUAP the notion of 'product ranges' which individual manufacturers may define. The product range may differ according to the characteristics in question. Although not always essential, using a 'worst case' scenario is a good way of defining a product range.

4.11. CEN/TCs and EOTA/WGs should also consider introducing, in technical specifications, 'direct' and 'extended' application rules of test results.[23] Such rules in technical specifications are familiar for fire related characteristics[24], but they may also apply to other performance characteristics. They are more likely to be included in clauses on testing (or in test technical specifications themselves) than in those on conformity assessment.

4.12. Where a manufacturer produces the same product on more than one production line or unit, or in more than one factory, there may be no need to repeat ITT for these different production lines or units (the manufacturer takes responsibility for ensuring that the products are indeed the same).

The need to repeat ITT depends on whether the production equipment used in the factory, and/or the production line or unit, might influence the performance declarations forming part of the CE marking. This might be subject to the product or even the production method. Where an influence exists, technical specifications may need to specify that ITT needs to be performed for each factory, production line or unit separately. Otherwise, the individual manufacturer can decide on this issue, being the ultimate responsible for the declarations accompanying the CE Marking. Manufacturers must be conscious that if ITT is performed on samples from various production units, lines or even factories, they will have to ensure that the declarations are valid for all products that rely on that ITT.

4.13. To avoid the repetition of testing, also the use of otherwise already existing transferable test results might be taken into consideration, as presented below.

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[22] As a contribution to further reducing test costs, specification writers should also propose products which play a minor part with respect to health and safety for the application of article 4(5) of the CPD.

[23] *Direct application rules* can be considered to be rules which specify how much products/kits may differ from those tested, while still maintaining the same test result (e.g. "Test results apply to products of the same composition with a density up to 10% greater than tested"). They effectively define product ranges. *Extended application rules* (which may contain calculation procedures) predict test results on the basis of one or more test results for the same test method (e.g. "Where the density differs by more than 10%, but its relationship is not known, a sufficient number of tests is needed to determine the relationship. Once the relationship is established, this may be used to calculate the results for products of intermediate density values.") (note that extended application is often used to derive a direct application rule)

[24] CEN/TCs and EOTA/WGs should refer to the work ongoing in this area.

Specification writers are invited to formulate, as an informal part of harmonised technical specifications, further details and guidance to this end, e.g. parameters for determining whether products have the same characteristics relevant for a given performance and, therefore, can be subject of shared ITT results (see hereafter).

4.13.1. *Shared ITT results (in principle applicable to all AoC systems)*

A manufacturer may use ITT results obtained by someone else (e.g. by another manufacturer, as a common service to manufacturers, or by a product developer), hereafter called 'other party ITT results', to justify his own declaration of conformity regarding a product that is manufactured according to the same design (e.g. dimensions) and with raw materials, constituents and manufacturing methods of the same kind, provided that

– the results are known to be valid for products with the same characteristics relevant for performance;

– in addition to any information essential for confirming that the product has such same characteristics, the other party who has carried out the ITT testing concerned or has had it carried out, has expressly accepted[25] to transmit to the manufacturer the results and the test report to be used for the latter's ITT, as well as information regarding production facilities and the production control process that can be taken into account for FPC;

– the manufacturer using other party ITT results accepts remaining responsible for the product being in compliance with all the provisions of the CPD, including both the design[26] and the manufacture of the product;

– he ensures that the product has the same characteristics relevant for performance as the one that has been subjected to ITT, and that there are no significant differences with regard to production facilities and the production control process compared to that used for the product that was subjected to ITT; and

– he keeps available a copy of the ITT report complying to Guidance Paper K point 6.2 that also contains the information needed for verifying that the product is manufactured according to the same design and with raw materials, constituents and manufacturing methods of the same kind.

Provided that the manufacturer provides the necessary documentation to this end, and that the notified certification body or notified test laboratory asked to undertake ITT under AoC system 1, 1+ or 3 has verified, by appropriate means, that the conditions to do so are fulfilled (see above), the latter may accept, upon request by the manufacturer, to use other party ITT results

[25] The formulation of such an agreement can be done by licence, contract, or any other type of written consent.

[26] For certain products (in particular those, for which the performance is calculated using Eurocodes) special provisions may apply.

under its responsibility[27]. Under AoC system 1 and 1+, the necessary verification includes that there are no significant differences with regard to production facilities and the production control process compared to that used for the product that was subjected to ITT [28].

Note: This does not mean "shared ITT". An ITT concerns the evaluation of a specific production made by a given manufacturer. In the declaration of conformity established by the manufacturer, which is a document which can have legal consequences, the product is identified and the name of the manufacturer is given. Therefore, ITT cannot be shared, but only test results.

4.13.2. *Cascading ITT (to be applied under systems 1, 1+ and 3 only[29])*

For some construction products, there are companies (system houses) which supply or ensure the supply of, on the basis of an agreement[30], some or all of the components (e.g. profiles, gaskets, weather strips for windows)[31] to an assembler who then manufactures the finished product (referred to below as the "assembler") in his factory.

Provided that the activities for which such a system house is legally established include manufacturing/assembling of products as the assembled one, the system house may take the responsibility for the ITT regarding one or several mandated characteristics of an end product which is subsequently manufactured and/or assembled by other firms in their own factory. When doing so, the system house must submit an "assembled product" using components manufactured by it or by others, to initial type testing and then make the ITT report available to the assemblers, i.e. the actual manufacturer of the product placed on the market.

Regardless the AoC system under which ITT is the task of a Notified Body (i.e. 1 and 1+ where the notified certification body is responsible for sampling, or 3 where this is a task of the manufacturer) samples for testing the "assembled product" submitted by the system house need to be taken at the latter.

To take into account such a situation, the concept of cascading ITT might be taken into consideration in the technical specification, provided that this concerns characteristics for which either a product certification body or a notified test laboratory intervene, as presented below.

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[27] Irrespective of the fact that, under system 3, the manufacturer remains responsible for choosing the samples.

[28] This might need the NB to visit the other party's facilities in addition to those of the manufacturer.

[29] Contrary to sharing ITT results, which is subject to severe formal rules (see 4.13.1) , in order to ensure sufficient traceability and transparency of responsibility, the legally less formalised cascading ITT should only be applied to AoC systems, under which ITT is a task for Notified Bodies.

[30] This can be, for instance, a contract, licence or whatever kind of written agreement, which should also contain clear provisions with regard to responsibility and liability of the component producer (system house, on the one hand, and the assembler of the finished product, on the other hand.

[31] These companies may produce components but they are not required to do so.

The ITT report that the system house has obtained with regard to tests carried out by a Notified Body, and which is supplied to the assemblers, may be used for CE marking purposes without the assembler having to involve again a Notified Body to undertake ITT of the product's characteristic(s) that were already tested, provided that:

- the assembler manufactures a product which uses the same combination of components (components with the same characteristics), and in the same way, as that for which the system house has obtained an ITT report. If this report is based on a combination of components not representing the final product as to be placed on the market, and/or is not assembled in accordance with the system house's instruction for assembling the components, the assembler needs to subject his finished product to ITT[32];

- the system house has notified to the manufacturer the instructions for manufacturing/assembling the product and installation guidance;

- the assembler (manufacturer) recognises being the one placing the construction product on the EEA Market and assumes the responsibility for the correct assembly of the product in accordance with the instructions for manufacturing/assembling the product and installation guidance notified to him by the system house;

- the instructions for manufacturing/assembling the product and installation guidance notified to the assembler (manufacturer) by the system house are an integral part of the assembler's Factory Production Control system and are referred to in the ITT report[33];

- the assembler is able to provide, to a Notified Body undertaking ITT of the remaining mandated characteristics or any other task needed for the attestation of conformity, and for control and surveillance purposes, documented evidence that the combination of components he is using, and his way of manufacturing, correspond to the one for which the system house has obtained an ITT report (he needs to keep a copy of the system house's ITT report);

- regardless the possibility of referring, on the basis of the agreement signed with the system house, to the latter's responsibility and liability under private law, the assembler remains responsible for the product being in compliance with all the provisions of the CPD, including both the design[34] and the manufacture of the product, which is given when he affixes the CE marking on his product.[35]

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[32] in the case of ETA according to the indications by the Approval Body

[33] or in the system house's ETA when the product is subject to an ETA

[34] For specific products (e.g. for design using Eurocodes) special provisions may apply.

[35] However, in case of failure due to incorrect or insufficient installation guidance, authorities must be able to invoke the liability of the system house or those acting on its behalf. (see also footnote 21)

4.14. The concept of using "previously existing data" is generally introduced by the sentence "Tests previously performed in accordance with the provisions of this standard or ETAG/CUAP (same product, same characteristic(s), same or more technically demanding and appropriate test method, sampling procedure and system of attestation of conformity) may be taken into account.". Introducing this concept may require that the CEN/TC or EOTA/WG determines the limitations of using data from previously performed tests. Such limitations may be related to the characteristic(s) concerned, the version(s) of the test method(s), the sampling procedure used, the sample dimensions, etc. The limitations specified in the standard or ETAG/CUAP cannot be related to the status (notified or not) of the laboratory that performed the test(s) that lead to the previously existing data.

4.15. The concept of product range may also apply, where previously existing data apply only to one or more characteristics of different products within the same range, rather than to the same product.

4.16. Where a product or kit manufacturer uses components which have already been shown (e.g. by CE marking) to comply with one or more requirements of the technical specifications applicable for that product or kit, the ITT which led to such compliance does not need to be repeated (as long as the component's properties or the means of determining them remain unchanged). Technical specifications should allow for this possibility, but shall also require that the component has the necessary performance levels and/or classes to meet the needs of the finished product or kit, taking into account its intended use(s).

Permitted alternatives

4.17. Use of manufacturer's testing facilities by notified testing laboratories**.**

4.17.1. In principle, testing laboratories approved for initial type tests for systems 1, 1+ and 3 and audit testing (1+) should perform their testing using their *own* testing apparatus and personnel.

However, such tests may also be performed using the manufacturer's testing facilities[36], i.e. equipment with or without the manufacturer's testing personnel operating it, for testing in the framework of conformity attestation, provided that:

- the manufacturer's facilities for testing are calibrated,
- the Notified Body agrees to the use of the manufacturer's testing facilities knowing that he retains the responsibility for the test performed and its results,
- the Notified Body conducts the test, and assists to them also in the case they are carried out by the manufacturer's staff,

[36] For instance, if it is excessively complex (e.g. large samples difficult to be transported) or economically disproportionate to perform the tests in the Notified Body's premises.

– the tests at the manufacturer's test facilities are performed in strict conformity with the testing procedure of the relevant test technical specification, including sampling and the preparation of samples, and

– the Notified Body decides whether to take into consideration the test results or not.

4.17.2. Insofar testing laboratories use manufacturer's testing facilities, it must be assured that they are and must remain third parties independent of their clients and other interested parties[37].

The use of the manufacturer's testing facilities does not mean any sub-contracting (Guidance Paper A clause 3.4). It does not give to the manufacturer the status of a notified body.

4.17.3. When facilities of the manufacturer are used by a Notified Body to perform all or part of testing this shall be noted in the test report.

4.18. Under AoC systems 2+, 2 and 4, for which ITT is a task for the manufacturer, the latter may entrust this task or parts of it to any party equipped and qualified to undertake correct ITT for the product concerned, provided that all rules relevant for the AoC system in question will be properly applied.

4.19. As far as establishing the fitness for use of products for which the existing technical specifications have not been applied, or only in part, attention is drawn to Guidance Paper I "The application of Article 4(4) of the Construction Products Directive".

5. Factory Production Control (FPC)

5.1. In the CPD, factory production control means the permanent internal control of production exercised by the manufacturer. FPC is the means by which a manufacturer ensures that the performances declared by him (obtained on the basis of ITT) continue to be valid for all subsequent products. This generally involves ensuring that subsequent products remain substantially the same as those submitted to ITT (i.e. having the same characteristics), although the concept of product range may also be applied to FPC. Where the manufacturer involves intermediaries (e.g. his agent established in the EU) for placing the product on the market, this control might also need to include the latter's facilities, i.e. by controlling there those features of this stage that could affect the product characteristics.

5.2. In general FPC is relevant to all characteristics. However, this does not mean that all characteristics have to be subject to verification and/or evaluation, or that the same methods used for ITT have to be used for FPC. FPC may involve control by indirect means (for example by control of incoming raw materials and control of the production process) or may involve the use of methods different (usually simpler

[37] See Guidance Paper A, point 3.5, in particular 3.5 (b).

and cheaper) from those used for ITT[38] but for which there is a relationship between the FPC method and the ITT one, at least for the individual product or range of products from each manufacturer. The technical specification should require that such a relationship is established, and indicate how it is established and documented, but the relationship itself does not have to be given in the technical specification. Even when the manufacturer uses CWFT or conventionally accepted performance, and the conformity to these is determined by indirect testing (see note below 3.5), the FPC system may need to require checks that the product continues to conform to the requirements for using such provisions (e.g. if the thermal conductivity is a tabulated value based on density, FPC may require that density be controlled).

5.3. Where different manufacturers may use different methods of control (e.g. some use process control while others use finished product testing), the hEN or ETAG/CUAP needs to provide for these equally, and may not distort conditions in favour of one or the other. In addition, technical specifications may not give preferential treatment to manufacturers operating an EN ISO 9001 quality management system, whether 3rd party certified or not (see 5.4 below on the use of EN ISO 9001). Usually, FPC combines both, i.e. frequent process control and infrequent finished product testing. In addition, care needs to be taken when drafting clauses on process control, so as not to directly or indirectly imply or require a specific manufacturing method, as this is not permitted.

5.4. FPC should, in general, be included in the normative part of the technical specification, but may be the subject of a separate annex or even a separate technical specification. Clauses on FPC for CE marking have to be written taking into account Guidance Paper B, and shall be referred to from Annex ZA. It is not permissible to make conformity with the whole of EN ISO 9001 (or earlier versions of the EN ISO 9000 series of standards) normative, but technical specifications may require conformity with those clauses of that standard which correspond to the requirements of Guidance Paper B as part of the overall FPC system. Moreover, manufacturers voluntarily running an EN ISO 9001 compliant quality management system may have a favourable presumption from the Notified Body (under its responsibility), provided the terms and conditions of the technical specification are covered by this EN ISO system.

5.5. The specification writers should consider how much detail to give on FPC[39]. They should recognise that the provisions on FPC are binding on both manufacturers and any notified bodies, and that they therefore need to be carefully drafted so as not to distort the market in favour or against a particular manufacturer, manufacturing method, quantity of production, type of production control, or any notified body. One way of ensuring this is to write FPC provisions in performance based, rather than prescriptive, terms. It is, of course, possible to combine both the performance

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[38] These methods allow the same characteristic or product property to be verified ensuring that the performances declared by the manufacturer continue to be valid for all subsequent products, but using equipment and conditions adapted to the means of the manufacturers and the production environment. Regarding FPC related to calculations, see Annex 3 of Guidance Paper K, in particular its items (11), (14), (18) and (22) as far as the tasks of Notified Bodies are concerned.

[39] For standards, the 'minimum' specification given in the CEN Model Product Standard (document CEN BT N888 and Supplement No.2) is no longer considered to be sufficient.

based approach and a more prescriptive element, using wording such as "The performance requirement is … . A sampling system complying with the frequency of testing provisions and conformity criteria of Table X is deemed to meet this performance requirement."

For technical specifications prepared by EOTA, see 2.2.

5.6. Where FPC requires the satisfaction of certain statistical criteria, and these take some time to be established, the technical specification should indicate how the manufacturer can demonstrate satisfactory FPC before having performed a sufficient number of tests to meet longer-term statistical criteria. It should also be borne in mind that the statistical approach is only practicable for those characteristics which are tested frequently. For characteristics which are tested only infrequently (e.g. once per year) or are not directly tested at all for FPC purposes, alternative requirements have to be provided.

5.7. For products under Attestation of Conformity (AoC) systems 1+, 1, 2+ or 2, if the technical specification does not contain sufficient detail, or has already progressed too far, to enable all Notified Bodies (CPD art. 18) to work consistently with each other, the Group of Notified Bodies (GNB) will develop these clauses, which will then be offered to the CEN/TC or EOTA for subsequent inclusion in the hEN or ETAG/CUAP/ETAs, so that they take on a normative status.[40] These clauses will be used by the NBs, until the technical specification is revised. CEN/TC or EOTA/WG should liaise with the relevant Sector Group of the GNB.

5.8. It is permissible to fix, in technical specifications, minimum frequencies for assessing (maybe fixing higher and lower minimum frequencies depending on results), which methods to be used, and details of other aspects of FPC, such as defective products and control of incoming raw materials. The use of frequencies (which generally should not be in terms of time, but in terms of quantity of production, e.g. once per 1000 m², or in terms of production time, e.g. once per production day) may not, however, be such as to disadvantage manufacturers who invest in more sophisticated methods of FPC control. The use of statistical methods to control production (e.g. control charts)[41] may be more appropriate for certain characteristics. All these are technical items for the CEN/TCs or EOTA/WGs to include, if they decide to do so, in the harmonised standard or the ETAG/CUAP and the Control Plan which is part of the confidential files the ETA is referring to.

5.9. In application of the CPD Annex III, Attestation of Conformity systems 1+, 1 and 2+ include "Further testing of products in accordance with a prescribed test plan". This is generally assumed to cover FPC testing of finished products[42]. The CEN/TC or EOTA/WG should liaise with the GNB to establish what is necessary to satisfy this requirement, which may then be presented either as a sub-clause in its own

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[40] For harmonised standards for which attestation systems 3 and 4 apply, i.e. where FPC is not subject to any third party evaluation, specification writers cannot rely on the GNB for support to include sufficient detail.

[41] Information on control charts can be found in ISO 7870:1993 "control charts – General guide and instruction", ISO 7966:1993 "Acceptance control chart" and ISO 8258:1991 "Shewhart control chart"

[42] Regarding FPC related to calculations, see Annex 3 of Guidance Paper K.

right, or be included as part of normal FPC testing of finished products. However, where the nature of the product or the method applied is such that no testing of the finished product is performed, this requirement may be excluded (and Table(s) ZA.3 in Annex ZA of harmonised standards, or similar information in an ETAG/CUAP, would be correspondingly adapted).

5.10. Where a manufacturer operates different production lines or units in the same factory, or production lines or units in different factories, and these are covered by a single, overall FPC system, the manufacturer still has to keep control records for each separate production line or unit (and this shall be made a requirement of the technical specification). However, when performing FPC inspections, although the product specific aspects need always to be evaluated, the Notified Body does not have to repeat systematically the assessment of 'general' FPC provisions which apply to all lines/units.

5.11. In some cases, a manufacturer may seek CE marking for an innovative or similar product[43], for which he does not yet have a fully operational FPC system. For such cases, the technical specification should specify the requirements that apply before the FPC system is fully operational, in order to allow the manufacturer to claim conformity to the technical specification, and what requirements apply once the system is fully operational.

5.12. In the case of single-application products (see 4.11.3), some of the aspects of FPC used for series production (e.g. finished product sampling) do not apply. The manufacturer will, however, still have to have an FPC system, for example controlling raw materials and keeping records. Where products covered by a hEN or ETA may be produced as single-application, the FPC clauses need to be written in a way which gives exemptions from those requirements which apply to series production only; however, the specification writers should be aware that the requirements for all products covered by one harmonised technical specification have to be equivalent.

5.13. In the case of kits, a number of different options may exist.

5.13.1. The kit manufacturer manufactures all components, in which case he takes full responsibility for the FPC regarding the kit, including its components (which may, where required by the technical specifications for the kit, go beyond the requirements laid down in the specification for that component as a single product, even if CE marked).

5.13.2. The kit manufacturer puts a kit on the market, for which he manufactures some components only and buys in other components[44]. In this case, the kit manufacturer is responsible for the FPC of the kit as a whole, including the components which he manufactures (see 5.13.1 above), also as far as

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[43] Usually, such products are outside the scope of hENs and, to be CE marked, require technical specifications in the form of an ETA. When production and FPC are not (fully) running, the demonstration of the conformity of the product shall be mainly done operating control/tests on the final product (final control/test).

[44] to be considered "incoming materials/products"

required by any other technical specification applicable to these components. Furthermore, regarding the component(s) that he buys in, he is responsible, where required by the technical specifications for the kit, for defining any necessary FPC requirement beyond those applicable to them as a single construction product. The following principles apply to the bought in components:

– The kit manufacturer enters into a contract with the component manufacturer, obliging the latter to perform FPC in accordance with the provisions of the technical specification applicable to the kit, to be subjected to third party assessment according to the rules to be applied if required so by the AoC system applicable, and to submit the required FPC records to the kit manufacturer.

– The kit manufacturer purchases one or several components on the open market (CE marked or not) or from a component manufacturer. In this case, the kit manufacturer has to take full responsibility for demonstrating the conformity of the kit as a whole, and all its components, with the technical specification, and, therefore, needs to operate a FPC system ensuring that conformity is maintained, in total. However, since the kit manufacturer, in this case, does not manufacture all kit components, the FPC cannot be entirely based on process control in his premises, so that normally it has to be based on finished product testing. Where this applies, the technical specification will need to include this possibility, and may be different from the FPC requirements for kit manufacturers that manufacture all components themselves[45].

5.13.3. The kit manufacturer uses only bought in components, in which case he is responsible for the FPC of the kit as a whole, and the principles of 5.13.2 apply accordingly for the bought in components.

Note: The guidance regarding kit components applies only to components that play a key role in the performance of the kit as defined in the technical specifications applicable. Technical specifications of the kit should identify which components play such a key role and specify applicable FPC requirements. For those playing a minor role, FPC based on identifying that they comply with the specification given by the manufacturer of the kit will be adequate.

5.14. It can be that the manufacturer of a single construction product or a kit, hereafter called "the basic product", expressly prescribes or requires a specific additional product to be applied for the intended end use (e.g. for fixing or site applied finishing), which plays a key role in the end use performance of the basic product as defined in the technical specifications applicable, but is not part of the basic product, although it constitutes with the latter a "virtual kit", and whose manufacturer does not need to operate a FPC system complying with the provisions of the technical specification for the basic product.

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[45] ISO 3951 and ISO 2859, which define receiving inspection, may form part of such a control process specified in the standard.

In this case, the manufacturer of the basic product should, where relevant, identify any necessary FPC requirement beyond those applicable to this key additional product as a single construction product and ensure himself that this is observed. Furthermore, he may be required to include in his FPC the indications needed to verify whether any potential change in the characteristics of this key additional product risks to reduce the end use performance of the basic product concerned. Where AoC system 1, 1+ or 2+ apply, the specifications for the basic product concerned may include provision to have this appropriately verified under the continuous surveillance of the manufacturer's FPC undertaken by a Notified Body.

Note: Technical specifications of the basic product should identify which additional product(s) play(s) such a key role and specify applicable FPC requirements.

5.15. When drafting FPC clauses, it may be useful to separate them into 'FPC requirements for all manufacturers' (e.g. frequency of FPC testing) and 'Manufacturer-specific FPC system requirements' (e.g. personnel and equipment). Because these latter are manufacturer-specific, it may not be appropriate for the text of the EN to define their details[46].

6. Additional remarks

As far as the responsibilities of a manufacturer, Notified Body and any other body acting in the attestation of conformity systems need to be clarified, information can be found in the *Guide to the implementation of directives based on the New Approach and the Global Approach*, available from the European Commission.

Because of issues such as batch sizes related to sampling (e.g. batches become smaller as they pass through the supply chain), specification writers may add, as an informal part of harmonised technical specifications, an additional clause dealing separately with sampling, testing and compliance criteria beyond those relevant for conformity assessment [47].

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[46] For products subject to ETAs, the details are given in the control plan which is part of the confidential files attached to the ETA., on the basis of the corner stones provided in the ETAG-CUAP

[47] Such clauses could also be helpful for other purposes, including those to which technical specifications do not apply, for instance for market surveillance by public authorities. It may be, for example, that the number of tests needed for market surveillance is significantly smaller than those required for initial type testing and FPC purposes.