



EUROPEAN COMMISSION  
ENTERPRISE DIRECTORATE-GENERAL

Single Market, regulatory environment, Industries under vertical legislation  
Conformity and standardisation, new approach, industries under new approach

CONSTRUCT 00/414 Rev.2

(RG-CPDW 053 Rev.2)

## MANDATE TO CEN/CENELEC

### CONCERNING THE EXECUTION OF STANDARDISATION WORK

### FOR HARMONIZED STANDARDS ON

### CONSTRUCTION PRODUCTS in contact with water intended for human consumption

#### RELATED TO THE FOLLOWING UNIQUE END USE :

Transportation, storage and distribution up to, and including the consumer tap of the water intended for human consumption.

#### FOREWORD

*This mandate is issued by the Commission to CEN/CENELEC within the context of the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (89/106/EEC), hereafter referred to as "the CPD", and of the Council Directive of 3 November 1998 on the quality of water intended for human consumption (98/83/EC), hereafter referred to as "the DWD".*

*The water intended for human consumption is hereafter referred to as "Drinking Water". The construction products in contact with this drinking water are hereafter referred to as "the CPDW". The Commission has created and administers a Working Group of the National Regulators for CPDW, hereafter referred to as "the RG-CPDW".*

*One of the aims of the CPD being the removal of technical barriers to trade in the construction field, in so far as they cannot be removed by means of mutual recognition among Member States, it seems appropriate that this standardisation mandate corresponds to the wish of the National Regulators, who have accepted the principles of setting up an European Acceptance Scheme, hereafter referred to as "the EAS".*

*This mandate is related to the preparation of both the supporting standards that will be part of the EAS, and of the harmonised product standards that will refer to them. The aim is, on one hand, to harmonise the national and/or regional laws, regulations and any kind of administrative provisions (hereafter referred to as "National provisions") and, on the other hand, to allow products complying with these harmonised product standards to be presumed to fit for their contact with Drinking Water.*

*As stated by the CPD, the responsibility that the Member States have for construction works on their territory remains unchanged.*

*In order to fulfil the provisions of article 7.1 of the CPD the present mandate has been structured in the following way:*

#### Chapter I - Grounds.

*General conditions within the framework of both the CPD and the DWD.*

*Chapter II – Background of the work of the RG-CPDW.*

*Framework of the development of a European Acceptance Scheme (EAS).*

*Chapter III - Harmonised supporting and product standards.*

*Conditions regarding the content and the presentation of the harmonised standards.*

*Chapter IV – Work Programme and Progress Reports.*

*Conditions regarding the programming, development and execution of the standardisation work for the CPDW.*

*The present document includes five Annexes:*

*Annex 1      Field of Application of the Mandate: List of products and Materials.*

*Annex 2      Technical Terms of Reference: List of characteristics to be dealt with.*

*Annex 3      Attestation of Conformity: in accordance with the relevant Commission Decisions.*

*Annex 4      Release of Dangerous Substances (through the external envelope).*

*Annex 5      Fitness for contact with Drinking Water (Health/Sanitary requirements).*

## **CHAPTER I:                GROUNDS**

1. This mandate falls within the framework of the general policy of the Commission with respect to technical harmonisation and standardisation, as well as within the scope of the two Directives, the CPD and the DWD. It replaces any previous mandate on the same products formerly issued on a provisional base by the Commission.

This mandate is based on article 7 of the CPD and has taken into consideration the Interpretative Documents<sup>1</sup> that serve as reference for the establishment of the harmonised standards (see article 12 of the CPD). It is also based on article 10 of the DWD and on the implementation of its annexes.

It serves to ensure the quality of the harmonised standards for the CPDW, provided that barriers to trade in these products exist and that the products fall within the scope of article 2.1 of the CPD;

2. Levels or classes of requirements for the works are under the responsibility of Member States and are not covered by the present mandate. As a consequence, they are not expected to be defined in the harmonised standard.
3. Levels or classes of requirements for the products may be proposed by the relevant technical committee(s). However their development by CEN is subject to two conditions: compliance with the Guidance Paper on levels and classes under the CPD, and endorsement by the National Regulators, at the RG-CPDW.
4. The harmonised product standards resulting from this mandate must allow for products to comply with them even where performance does not need to be determined for a certain characteristic because at least one Member State has no legal requirement at all for such characteristic. This partial testing will be seen in the CE Marking of the relevant product(s).

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<sup>1</sup> O.J. No. C 62, 28.02.1994

## **CHAPTER II: BACKGROUND OF THE WORK OF THE RG-CPDW**

1. More than 10 years ago, the CEN created technical committees ("TCs"), organised whether by products and/or materials, or by horizontal issues, such as water supply or water analyses. In 1994, at a seminar in Vienna, the CEN identified the strong regulatory provisions in the water supply.
2. For the time being, Member States have different National Acceptance Schemes for the CPDW. This creates barriers to trade and increases the certification expenses of the industry. In 1998, the Commission launched a feasibility study on the possible convergence of four National Approval schemes. The positive output of this study were presented in March 1999 to the Standing Committee on Construction who approved the creation of a Regulators Group for Construction Products in contact with Drinking Water ("the RG-CPDW"). These Regulators have officially been nominated by the Member States. The branches concerned of the industry and the relevant CEN Representatives are officially participating in the RG-CPDW work. The RG-CPDW objective is to prepare a European Acceptance Scheme (EAS) for all products and all materials in contact. This EAS will be based on EC Decisions that will fix the European standards (ENs) to be used and the regulatory choices (e.g. acceptance criteria).
3. Since the beginning of its work, in June 1999, the RG-CPDW has identified most of the difficulties that are/will be met when harmonising the acceptance schemes for all materials and all products from different National traditions and approaches. In particular, the RG-CPDW has identified the regulatory issues, for which the decisions shall be taken by the Regulators, and without which the standardisation process could not be finalised.
4. In order to define as clearly as it could the European directions chosen by the RG-CPDW, an EAS-on-paper will be finalised by the end of the year 2000. As far as the standardisation work is concerned, a difference shall be made, in the attached Annex 2, between the "CPD-type" characteristics (also called "mechanical" characteristics), for which the CEN already received a Mandate in March 1999 (M131), and the "DWD-type" characteristics (also called "sanitary" or "health" characteristics), that are the real new requests of the present Mandate. It shall be noted that some products may not have been covered by M131 (e.g. water meters, membranes, etc.), but are covered by the present Mandate, or vice-versa (e.g. conduits, ducts).
5. The Member States have unanimously agreed that a first batch of research topics should be launched as soon as possible, in order to reach, after the research and the standardisation phases, harmonise supporting standards. These topics are: cytotoxicity, GC-MS, microbial growth and actions of disinfectants. The related standardisation work could only start when the research programme will be completed, conclusions and recommendations being expressed, and having been endorsed by the RG-CPDW.

## **CHAPTER III: HARMONISED SUPPORTING AND PRODUCT STANDARDS**

1. The supporting and harmonised product standards shall be prepared to allow those products listed in Annexes 1 and 2 to be able to demonstrate the satisfaction of the EAS requirements.
2. The supporting standards will contain:
  - The list of materials to which this test method shall apply; and
  - A clear distinction between the regulatory and standardisation aspects; and
  - A transfer, without change, of the regulatory topics (e.g. sampling method, conditions of test, acceptance criteria, etc.), as they will be provided by the RG-CPDW, through a Commission Decision or by another mean; and
  - A clear definition of the test. In particular, specific information could be added in the informative part of the standard;

3. The harmonised product standard will contain :
  - A detailed scope and field of application; and
  - A detailed description of the product or family of products covered; and
  - The definition of the characteristics of the products listed in Annex 2 of the mandate (expressed in performance terms, as far as practicable) that are relevant to the satisfaction of the CPD Essential Requirements (CPD-type characteristics) and of the EAS requirements (EAS-type characteristics); and
  - As far as the sanitary aspects are concerned, a clear reference to the supporting standard, without any change in its contents; and
  - Guidance on the characteristics that have to be stated within the labelling that will accompany the CE marking and on the way of expressing the determined values, if any, of these characteristics; The CPD Guidance Paper on CE Marking shall be taken into consideration; and
  - The system for attestation of conformity as required in annex 3 of the mandate and the corresponding specific provisions for the evaluation of conformity.
4. The CEN-TCs working on the EAS related test methods (supporting standards) will be provided with the regulatory topics by the Commission, after consultation of the RG-CPDW.
5. It is clearly understood that the treatment of the CPD-type characteristics shall be, where possible, identical as the same characteristics related to the Pipes, Tanks and ancillaries not in contact with Drinking water, expressed in the Mandate to CEN (M131). It is assumed that products for which the CE Marking results from the compliance with harmonised product standards developed under Mandate M131, will only have to pass the sanitary tests, i.e. to prove their fitness for contact with drinking water.
6. The relevant systems for attestation of conformity, according to Article 13.3 and Annex III of the CPD, are listed in annex 3. For the establishment of the corresponding specific provisions of evaluations of conformity, the harmonised product standard will take into account :
  - The recommendations of paragraph 3 of Annex 3.
  - The label accompanying the CE marking will list all the characteristics to be declared according to the EAS requirements. In order to take into account existing regulations on products where performance for one or more characteristics may not be required, the label should allow the manufacturer the application of the "No performance determined" case for that or those characteristics.

#### **CHAPTER IV: WORK PROGRAMMES and PROGRESS REPORTS**

1. The need for a close, proactive co-operation between the Regulators and the specifications writers has been recognised by all the parties concerned.
2. Consequently, CEN/CENELEC will present the Commission with two detailed work programmes:
  - a work programme related to the supporting standards (test methods), that will be prepared by the horizontal TCs (water supply and water analyses). This work programme shall be delivered to the Commission, the latest three months after the reception by CEN of this Mandate.
  - a work programme related to the product standards, that will be prepared by the product/material TCs. This work programme shall be delivered to the Commission, the latest nine months after the reception by CEN of this Mandate.

3. The work programme on supporting standards should identify clearly the list of standards to be developed, taking into consideration all the products and materials listed in the attached Annex 1.

Furthermore, for each supporting standard (test method), it should:

- indicate the materials/products for which it applies; and
  - indicate the CEN work item reference; and
  - differentiate the regulatory and voluntary issues/topics, in compliance with the resolutions/decisions of the RG-CPDW; and
  - justify the timetable foreseen for its finalisation; and
  - identify the technical committee responsible for its preparation. In particular, duplicate works (e.g. TC155WG2 and TC164WG3) shall be avoided.
4. When a supporting test standard for one characteristic does not exist or is not in the work programme of the TC(s), a clear statement should be presented indicating whether CEN is able, or is willing, to produce it or not. This applies in particular to the “minor” products, as defined in the Annex 5 of this document.
  5. CEN/TC(s) must give a technical answer for the determination of the test methods, taking into account the wishes of the Regulators, that are expressed either in this Mandate, or in relevant documents prepared by the RG-CPDW, in particular the EAS-on-paper document.
  6. Any proposal(s) for the addition of test method(s) not included in the present Mandate, but considered relevant by the TC(s), should be presented in a special chapter of the work programme on supporting standards, for further analysis by the RG-CPDW and by the Commission services. Standards prepared for products outside this mandate will not achieve the status of harmonised standards in compliance with the CPD provisions.
  7. Any proposal(s) for the addition of characteristics and durability aspects not included in the Mandate, but considered relevant by the TC(s), should be proposed in a special chapter of the work programme on supporting standards, for further analysis by the RG-CPDW and by the Commission services.
  8. The work programme on product standards should identify clearly the list of standards to be developed, taking into consideration all the products and materials listed in the attached Annex 1.

Furthermore, for each harmonised product standard, it should :

- indicate the name(s) of the product(s)/product family to be covered; and
  - indicate the CEN work item reference; and
  - define the forms and materials to be covered (in accordance with Annexes 1, 2, 3, 4 and 5 of this mandate); and
  - attach the list of supporting standards, in compliance with the work programme on supporting standards defined above; and
  - justify the timetable foreseen for its finalisation; and
  - identify the Technical Committee(s) responsible for the work.
9. Any proposal(s) for the addition of products and/or materials and/or forms not included in the present Mandate, but considered relevant by the TC(s), should be presented in the work programme for further analysis by the RG-CPDW and by the Commission services. Standards prepared for products outside this mandate will not achieve the status of harmonised standards in compliance with the CPD provisions. In addition to the provisions of article 4.1 of the CPD, it must be taken into account that all the products included in the mandate have a system of

attestation of conformity in accordance with the relevant Decision of the Commission; those products not included have not.

10. After examination of the work programmes and consultations with the relevant CEN-TCs, the RG-CPDW and the Commission services will endorse the timetable and the list of standards or parts of standards which meet the terms of this mandate and which will be recognised as harmonised supporting or product standards.
11. The terms of reference of this mandate may be subject to modification or addition, if necessary. Successive amendments to this Mandate would then be addressed to CEN.
12. Representatives of the authorities responsible for national regulations have the right and shall be able to participate in the activities of the CEN-TCs through their national delegations and to present their points of view at all stages of the drafting process of the harmonised standards.
13. The Commission may participate in standardisation activities as observer and has the right to receive all relevant documents.
14. The CEN will immediately inform the Commission of any problem relating to the carrying out of the mandate. Furthermore, the CEN will, twice per year, submit to the Commission, for examination by the RG-CPDW, a progress report on work within the framework of this Mandate. This progress report will include a description of work carried out and information on any difficulties being met, whether political or technical. The progress report will be accompanied by the latest drafts of each standard under the mandate and by updated reports on any subcontracted work. In particular, in order to avoid any difficulty, it appears suitable that the final draft of each supporting and product standard, that will be submitted for the formal vote, according to the CEN procedures, is examined by the RG-CPDW for comments, if any.
15. CEN will acknowledge to the Commission its acceptance of this Mandate. However, this acceptance can take place only after the two work programmes have been endorsed by the Commission services.
16. Acceptance of this mandate by CEN will initiate the standstill procedure referred to in article 7 of Council Directive 83/189/EEC of 28 March 1983 modified by Council Directive 88/182/EEC of 22 March 1988 and the European Parliament and the Council Directive 94/10/EC of 23 March 1994.
17. CEN Members will publish the standards transposing the harmonised European standards at the latest 6 months after a positive vote in CEN. National standards covering the same scope will continue to be applicable until the date agreed between CEN and the Commission.

# ANNEX 1

## FIELD OF APPLICATION \*

### CONSTRUCTION PRODUCTS IN CONTACT WITH WATER INTENDED FOR HUMAN CONSUMPTION

LIST OF PRODUCTS INCLUDED IN THE MANDATE

TO BE USED IN:

19/33 SUPPLY OF HOT AND COLD WATER  
33/33 STORAGE FIXTURES

FORMS	MATERIALS	PRODUCTS FOR CONSIDERATION
Kits Piping system Storage system	As indicated below for components	Kits, composed of pipes and/or tanks, fittings, adhesives and joints, including their supports, to be used for the transport, storage and/or distribution of the water intended for human consumption.
Rigid components Flexible components	<p><b>Cementitious materials :</b> (e.g. reinforced/fibred/ unreinforced/prestressed precast concrete, cement mortar lining with or without seal coat, polymer modified, fibre cement, ...)</p> <p><b>Metallic materials :</b> (e.g. steel, aluminium, copper, alloys, cast/ductile/grey/ malleable cast iron, ...)</p> <p><b>Organic materials :</b> (e.g. plastics, polymers, rubbers, elastomers, PVC, PE,...)</p> <p><b>Glassy materials :</b> (e.g. glass, vitrified clay, ...)</p> <p><b>Composite</b> (e.g. glass fibre reinforced polyester, carbon fibre reinforced epoxy resins,...)</p>	Pipes (coated or uncoated).

\* Under the provisions of both Council Directives 89/106 (CPD) and 98/83 (DWD), it is of the competence of the Member States to fix from which place the networks carry Drinking Water (e.g. from the last treatment plant). It is understood that the DW distribution goes up to, and includes the consumer taps.

Cont.

FORMS	MATERIALS	PRODUCTS FOR CONSIDERATION
Components	<b>Cementitious materials :</b> (e.g. reinforced/fibred/ unreinforced/prestressed precast concrete, in situ concrete with or without organics, polymer modified, fibre cement, ...)  <b>Metallic materials :</b> (e.g. coated/mild/lined/stainless steel, aluminium, copper, alloys, ductile iron, cast iron, ...)  <b>Organic materials :</b> (e.g. plastics, rubber, ...)  <b>Glassy materials :</b> (e.g. glass, vitrified clay, ...)  <b>Composite</b> (e.g. glass fibre reinforced polyester, admixtures,...)	<b>Tanks</b> (including <u>closed and vented hot water storage units</u> ) used in fixed installation for supply or storage of water intended for human consumption
Components	Metals Rubber Plastics Composite Cast iron	<b>Valves, taps, pumps, watermeters, protection and safety            devicess</b>  <i>Coated or uncoated.</i>
Components	Metals Rubber Plastics Chemical compounds	<b>Fittings, adhesives, joints, joint sealings and gaskets</b>
Malleable Flexible	Composite	<b>Membranes, resins.</b>
Malleable	Composite	<b>Coatings, including linings.</b>
Malleable	Composite	<b>Lubricants, greases</b>

**The following Directives must be taken into consideration, when appropriate :**

89/106/EEC of 12 December 1988, known as the "CPD".

89/109/EEC and amending/implementing Directives concerning materials in contact with foodstuffs  
 90/128/EEC of 23 February 1990 relating to plastics materials and articles intended to come into  
 contact with foodstuffs.

93/68/EEC of 17 March 1993 amending all above Directives as well as the CPD.

97/23/EC of 29 May 1997 on Pressure Equipment.

98/83/EC of 3 November 1998, known as the "DWD".



## ANNEX 2

### TECHNICAL TERMS OF REFERENCE

**Note :** not all of the characteristics shown in the following tables will be relevant for every product in a particular family or sub-family. CEN should select the subset of characteristics applicable to a particular product from the full set provided.

<b>CONSTRUCTION PRODUCTS</b> <b><u>IN CONTACT WITH</u></b> <b>WATER INTENDED FOR HUMAN CONSUMPTION</b>
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TO BE USED IN:

19/33 SUPPLY OF HOT AND COLD WATER; 33/33 STORAGE FIXTURES

#### 1. KITS (Piping and/or Storage Systems)

Used for water intended for human consumption, pressurised or unpressurised, inside or outside (both underground and above ground) buildings. Including pipes, tanks, fittings, safety devices, adhesives, joints, valves, taps, meters, pumps, membranes, and possibly special components.

NOTE: Kits will fit for contact with Drinking Water only if all the components they are composed of have been tested and assessed for their fitness.

Characteristics of the PIPING/STORAGE KITS/SYSTEMS to be covered by the harmonised standard will be:

E R	PERFORMANCE CHARACTERISTICS	Durability <sup>(1)</sup>
1		<b>Y</b>  <i>(against corrosion, freeze-thaw, abrasion, UV, Variation of temperature,... As relevant)</i>
2		
3	Crushing strength	
+	Internal and external pressure strength	
4	Longitudinal bending strength	
+	Mechanical resistance of support	
4	Maximum load for admissible deformation	
	<b><u>FITNESS for contact with Drinking Water (EAS, see Annex 5)</u></b>	
	Impact resistance	
	Tightness	
	Effectiveness of safety devices	
	Release of dangerous substances	
5	Noise level	
6	Thermal properties	

Note: All the "unbolt" characteristics are also being developed under the Mandate M131

#### 2. PIPES

Rigid or flexible or malleable tubes used for the conveyance of water intended for human consumption. For pressured or unpressured systems, inside or outside buildings, underground or above ground installations.

Characteristics of the Pipes to be covered by the harmonised standard will be:

E R	PERFORMANCE CHARACTERISTICS	Durability <sup>(1)</sup>
1		<b>Y</b>  <i>(against internal and External corrosion, freeze-thaw abrasion, UV, ..., as relevant)</i>
2		
3	Crushing strength	
+	Internal and external pressure strength	
4	Longitudinal bending strength	
	Maximum load for admissible deformation	
	Dimensional tolerances	
	Impact resistance	
	<b><u>FITNESS for contact with Drinking Water (EAS, see Annex 5)</u></b>	
	Tightness	
	Release of dangerous substances	
5		
6	Thermal properties	

Note: All the "unbolt" characteristics are also being developed under the Mandate M131

### 3. TANKS

Tanks used in fixed installation, underground or above ground, pressurised or not, including closed and vented hot water storage units, used for storage and/or supply of water intended for human consumption.

The Directives 87/404/EEC and 97/23/EEC have also to be taken into account when internal pressure exceeds 0.5 bar.

Characteristics of the TANKS to be covered by the harmonised standard, besides those already covered by other above mentioned Directives, will be:

E R	PERFORMANCE CHARACTERISTIC	Durability <sup>(1)</sup>
1	Mechanical resistance and stability	<b>Y</b>  <i>(against internal and external corrosion, ..., when relevant)</i>
2		
3	Crushing resistance	
+	Internal pressure	
	Load bearing capacity	
	Impact resistance	
	<b><u>FITNESS for contact with Drinking Water (EAS, see Annex 5)</u></b>	
4	Tightness	
	Release of dangerous substances	
5		
6		

Note: All the "unbolt" characteristics are also being developed under the Mandate M131

### 4. PROTECTION AND SAFETY DEVICES

This family of products includes in particular leakage alarm systems and/or overfill prevention devices for tanks, pre or post installed, including mechanical and/or electrical devices.

The Directives 73/23/EEC, 89/336/EEC and 94/9/EEC shall be taken into account, when appropriate.

Characteristics of the PROTECTION AND SAFETY DEVICES to be covered by the harmonised standard, besides those already covered by the above mentioned Directive, will be:

E R	PERFORMANCE CHARACTERISTIC	Durability
1		Y
2		
3		
+	Effectiveness of leakage alarm system and/or of overfill prevention devices	
4	<b>FITNESS for contact with Drinking Water (EAS, see Annex 5)</b>	
5		
6		

Note: The above "unbolt" characteristic is also being developed under the Mandate M131

## 5. FITTINGS, ADHESIVES, JOINTS, JOINT SEALINGS AND GASKETS

Elements for connecting one component to another, providing tightness to the system. For rigid, flexible and/or malleable pipes, for all tanks; for pressurised or unpressurised systems inside buildings or outside buildings, underground or above ground. Definition of these elements must indicate material, diameter and thread step if relevant.

Characteristics of the FITTINGS, ADHESIVES, JOINTS, JOINT SEALINGS AND GASKETS to be covered by the harmonised standard will be:

E R	PERFORMANCE CHARACTERISTIC	Durability <sup>(1)</sup>
1		Y
2		
3	Crushing strength	
	Internal pressure	
+	Maximum load for admissible deformation	
	Dimensional tolerances	
4	Tightness	
	<b>FITNESS for contact with Drinking Water (EAS, see Annex 5)</b>	
	Release of dangerous substances	
5		
6		

Note: All the "unbolt" characteristics are also being developed under the Mandate M131

## 6. VALVES and TAPS

Device of the nature of a flap, lid, plug, etc., applied to a pipe and/or a tank to control or to release the passage of water intended for human consumption. Definition of the valve/tap must indicate material, diameter and thread step if relevant.

Characteristics of the VALVES and TAPS to be covered by the harmonised standard will be:

E R	PERFORMANCE CHARACTERISTIC	Durability <sup>(1)</sup>
1		Y
2		
3	Dimensional tolerances	
	Internal pressure	
+	Tightness	
4	Effectiveness	
	<b>FITNESS for contact with Drinking Water (EAS, see Annex 5)</b>	
	Protection against backflow	
	Release of dangerous substances	
5	Noise level	
6		

Note: All the "unbolt" characteristics are also being developed under the Mandate M131

## 7. PUMPS and WATERMETERS

The metrology of the watermeters and pumps is not considered here.

Characteristics of the PUMPS, WATERMETERS and MEMBRANES to be covered by the harmonised standard will be:

E R	PERFORMANCE CHARACTERISTIC	Durability <sup>(1)</sup>
1		Y
2		
3+4	<u>FITNESS for contact with Drinking Water (EAS, see Annex 5)</u> Release of dangerous substances	
5		
6		

## 8. MEMBRANES, RESINS, COATINGS, LININGS, LUBRICANTS, GREASES

CEN shall determine whether and how specific product standards will be developed for these products. The coated products shall be tested as such, but the coatings may need to be CE Marked. Lubricants and greases could only be used in very specific conditions to be defined. Factory made and in-situ products shall be considered.

Characteristics of the MEMBRANES, RESINS, COATINGS, LININGS, LUBRICANTS and GREASES to be covered by the harmonised standard will be:

E R	PERFORMANCE CHARACTERISTIC	Durability <sup>(1)</sup>
1		Y
2		
3+4	<u>FITNESS for contact with Drinking Water (EAS, see Annex 5)</u>	
5		
6		

ANNEX 3  
ATTESTATION OF CONFORMITY

**Note:** for products having more than one of the intended uses specified in the following families, the tasks for the approved body, derived from the relevant systems of attestation of conformity, are cumulative.

<b>Product family:</b> <b>CONSTRUCTION PRODUCTS</b> <b><u>IN CONTACT WITH</u></b> <b>WATER INTENDED FOR HUMAN CONSUMPTION</b>
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**1. Levels and classes for product performances**

- 1.1 For the time being, the differences specified in Article 3.2 of the CPD do not seem to give rise to the need of a classification system for products.
- 1.2 Further needs may be identified on the basis of differences specified in Article 3 (2) of the CPD, which are justified in conformity with Community law (IDs Clause 1.2.1). Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the provisions set in the Chapter I para 2 and 3 of this Mandate apply.

**2. Systems of attestation of conformity**

For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonized standards:

Product(s)	Intended use(s)	Level(s) or class(es)	Attestation of conformity system(s)
<b>-Kits (Piping and storage systems)</b> <b>-Pipes</b> <b>-Tanks</b> <b>- Valves, taps, pumps, watermeters, protection and safety devices.</b> <b>-Fittings, adhesives, joints, joint sealings and gaskets</b> <b>- Membranes, resins</b> <b>- Coatings</b> <b>- Lubricants, greases</b>	In installations for the transport/distribution/storage of water intended for human consumption, up to, and including, the consumer taps.	----	1+ <sup>(1)</sup>
System 1+: see CPD Annex III. 2.(i), with audit-testing of samples <sup>(1)</sup> the performance of the products, other than that related to the sanitary properties of the product ("fitness for contact with water intended for human consumption"), shall be assessed following the provisions of Decision 1999/472/EC, published in O.J. L 184, on 17.07.1999, p. 42 to 49.			

### **3. Conditions to be applied by CEN on the specifications of the attestation of conformity system**

3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For products under system 1+, regarding the initial type testing of the product [see Annex III.1.a of the CPD], the task for the approved laboratory will be limited to the assessment of the following characteristics:

**- Fitness for contact with Drinking Water**

(All other characteristics of the products will be dealt with using the system enforced in the Commission Decision 1999/472/EC)

3.3 For products under system 1+, for the continuous surveillance, assessment and approval of the factory production control [see Annex III.1.g of the CPD], only parameters related to the following characteristic shall be of interest of the approved body:

**- Fitness for contact with Drinking Water**

(All other characteristics of the product will be dealt with using the system enforced in the Commission Decision 1999/472/EC)

3.4 For products under system 1+, for the initial inspection of the factory production control [see Annex III.1.f of the CPD], only parameters related to the following characteristic shall be of interest of the approved body:

**- Fitness for contact with Drinking Water**

(All other characteristics of the product will be dealt with using the system enforced in the Commission Decision 1999/472/EC)

ANNEX 4  
RELEASE OF DANGEROUS SUBSTANCES

<b>Product family:</b> <b>CONSTRUCTION PRODUCTS</b> <b><u>IN CONTACT WITH</u></b> <b>WATER INTENDED FOR HUMAN CONSUMPTION</b>
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The present Annex 4 deals with substances that are considered as dangerous, therefore restricted in terms of content in the formulation, or potential "external" release. European technical specifications must be adopted taking into account necessary legislation on substances classified as dangerous.

The Annex 5 of this Mandate deals with the assessment of fitness for use of the CPDW. In this Annex 5, care is taken about the potential product/material migrations that could affect the quality of water. However, the external migrations are not considered in Annex 5, nor the possible content of a substance restricted in use at the European or National levels, although this substance does not migrate into the water, nor affects its quality.

This results from the Interpretative Documents, where it is noted, in the introduction note to all six of them, that:

*"Concerning dangerous substances which are in construction products, classes and/or levels of performance to which technical specifications will refer, shall allow the levels of protection needed by the works to be guaranteed, taking into account the purpose of the works."*

In addition, outside the scope of the Directive, writers of technical specifications must take into account legislation which affects materials to be used for construction products and which are regulated for reasons not related to the incorporation of the construction products into the works.

In order to permit technical specification writers to take into account the necessary legislation, a Guidance Paper (GP H) on Dangerous Substances was elaborated by the Commission services. This Guidance Paper mentions the European regulations (Directive 76/769/EEC and all related following amendments and adaptations), as well as the specific national requirements when and where more stringent than the European ones. Specification writers should use this document as a guide, but must also take account of any other relevant dangerous substances that the working document does not yet include.

ANNEX 5  
**FITNESS FOR CONTACT WITH DRINKING WATER**

<b>Product family: CONSTRUCTION PRODUCTS IN CONTACT WITH WATER INTENDED FOR HUMAN CONSUMPTION</b>
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**1. CONTEXT: RELATIONSHIP BETWEEN REGULATORS AND SPECIFICATIONS WRITERS**

This Annex is intended to fulfil two requirements:

- To provide specifications writers with a general framework within which their work shall be conducted, as far as DWD-type characteristics (also called “health/sanitary” characteristics) are concerned.
- To set out the structures and elements of the EAS approval processes in such a way as to allow the identification of those components for which compliance is, or is not, required to be declared for the purposes of CE Marking

The work of drafting supporting standards (test methods), and the subsequent processes of assessing and declaring full or partial compliance, will need to have regard to the full statements on requirements and procedures for the EAS to be issued by the RG-CPDW.

For this reason, two main principles have to be followed:

- The specifications writers of supporting standards will follow the principles set up in the “EAS-on-paper” document, which reflects the up-to-date desires of the Regulators.
- The specifications writers of supporting standards may propose either deviations from these principles, or new approaches on regulatory matters. However, before being developed, these proposals shall prior be accepted/endorsed by the RG-CPDW.

These TC(s)’ proposals shall be submitted to the Commission, for examination by the RG-CPDW, by means of the work programme and/or the progress reports defined in Chapter III of this Mandate. Furthermore, the TCs concerned can at any time contact the Commission on a specific subject that will be addressed to the next RG-CPDW meeting for opinion.

**2. SCOPE OF APPLICATION**

All the products and materials and forms set out in Annex 1 of this Mandate shall be dealt with.

The RG-CPDW may also identify new products to which the EAS may be applied in all or some Member States to meet the requirements of the Drinking Water Directive (DWD). Examples are products used in water treatment processes, and products applied, or incorporated within works, on site. The RG-CPDW, through an amendment to this Mandate, may request CEN to develop laboratory procedures and measurement methods for such products.

**3. STANDARDS TO SUPPORT THE EAS**

It is the intention of the Commission and of the RG-CPDW to use European Standards wherever possible to specify the detailed methods to be used in the various tests required by the EAS. Some already exist as ENs or prENs, there are items under development, but many new work items are likely to be identified.

Unlike Harmonised Standards prepared under the CPD, this Mandate anticipates that complete supporting standards, later published as ENs, will describe the methodology, procedures and criteria to be applied in the operation of the EAS. However, the regulatory matters will be clearly identified as



such. They will/could be fixed by means of EC Decisions, following proposal of the RG-CPDW, and will/could be reported in the standards.

#### **4. STAGED APPROACH**

The research programme required for the first implementation of the EAS should be finalised at the end of 2002, and until that research is complete it will not be possible to provide CEN with adequate information for the development of all the standards likely to be needed. However, it is intended that drafting of methods will be started on those EAS elements where the nature of the work to be carried out by CEN can be clearly specified by the RG-CPDW. Therefore the Mandate gives both specific directions on the work to be started now, and a general framework within which supplementary Mandate directions will be given to CEN as the regulatory requirements are clarified.

This modular approach is intended to be consistent with any agreements that may be made by water regulators at European level, or nationally, to introduce certain elements of the EAS ahead of eventual full implementation.

#### **5. ROLE OF THE RG-CPDW**

Technical issues are expected to arise that cannot currently be anticipated, or are too specific and detailed to appear within the general framework set by the Mandate. When such issues cannot be resolved by the specifications writers alone, decisions will be made by the RG-CPDW. These decisions, and other guidance prepared by the RG-CPDW, such as the "EAS-on-paper" document, will be circulated to the CEN/TCs responding to the Mandate.

#### **6. POLICY APPROACH TO DIFFERENT MATERIALS FOR SIMILAR PRODUCTS**

In several water industry applications, products with similar functions can be made of differing materials. It is intended that all materials will be subject to appropriate testing to demonstrate comparable standards of consumer protection, and to offer a "level playing field" in the market place for the various materials. This does not mean, however, that all materials will be subject to the same tests. Procedures and measurement methods will be devised having regard to the nature of the constituent substances in the material, performance characteristics over time, and the detail of established regulatory requirements.

Given the quite different chemical constituents of organic, metallic and cementitious materials, and the different performance patterns in service, different test suites appropriate to this variety are set out below for these three classes of material. These suites are designed specifically to examine potential adverse health and aesthetic effects, and regulatory non-compliance relevant to the character of the material.

#### **7. "MINOR" PRODUCTS**

At present, several Member States have constituted lists of products for which the fitness for contact with DW can be certified without testing or with a limited/partial testing. A European list shall be set up by the RG-CPDW. The main principle retained so far is that the certification scheme for these "minor" products will be function of the surface in contact (S/V) and of the degree of potential adversity. If both aspects were judged negligible, then no testing would be required. However, a continuous surveillance of the properties of such products shall/should take place.

#### **8. TREATMENT OF INDIVIDUAL MATERIALS AND ASSEMBLED PRODUCTS**

Testing will be straightforward when single materials, or products made from single materials, are being examined. Testing of assembled products (e.g. taps, meters, valves, etc.) will be more complex. A variety of materials are likely to be involved, and some components may be so small as to be regarded as making no detectable impact on water quality. The RG-CPDW will issue guidance on the definition and treatment of "minor products" (see # 7). A study should be carried out to evaluate

whether the manufacturers of components would agree to prepare product standards for their components, which would lead to a CE Marking of these products. CEN will need to anticipate testing requirements for single materials and for assembled products.

## 9. THE APPROACH TO CE MARKING

It is intended that, on one hand, all CPDW throughout Europe will be required to comply with all elements of the EAS, and, on the other hand, that all the CPDW complying with both all the CPD-type and all the DWD-type characteristics will be CE Marked. As far as the CE Marking is concerned, two exceptions have, however, to be noted:

- it is anticipated that Transitional Periods will be agreed to allow Member States to adjust local technical and regulatory practices to the new, and potentially more rigorous, requirements of the EAS. During this period products will be able to carry the CE Marking if they comply with local, transitional, requirements that are less than those of the full EAS. The information accompanying the CE Marking will need to be capable of demonstrating the levels of compliance achieved, and the use of the “No Performance Determined” option for EAS elements not yet fully adopted. Thus the various elements of the relevant EAS test suites will need to be distinguishable to allow appropriate declarations of compliance. Whilst the CE Marking can be used without the product achieving full EAS compliance, the Commission and the RG-CPDW will consider the idea of using an easily recognisable **logo** on the CE Marking of products that have secured full approval, and can therefore be used anywhere in Europe as regards “Fitness for Contact with Drinking Water”.
- The “minor” products, i.e. the CPDW for which both the surface in contact and the toxicity risks are recognised small enough not to affect the quality of the DW. The concept will be explained in the “EAS-on-paper” document. A list of these products will be made available later, eventually by a European Decision, when it will be agreed at the Regulators level.

## 10. STRUCTURE OF THE FULL EAS ANALYSIS AND MEASUREMENT PROGRAMME

It is envisaged that the EAS analysis and measurement programme will comprise 4 elements. This series is structured below to reflect the increasing complexity and costs of test procedures. More detailed information on testing sequences to be used in practice will be issued by the RG-CPDW.

- Compliance with Positive List requirements. The RG-CPDW expects European Positive Lists for monomers, additives, colorants, coatings, rubbers, epoxy polymers, greases, sealings, solvents, adhesives, metals. These lists will be mainly alphabetical ones substance-per-substance, except specific cases, to be defined later, where polymer specific lists would be set up.
- Series 1 Tests
  - Organoleptic: odour, flavour, colour, and turbidity.
  - Chlorine demand
  - TOC
- Series 2 Tests
  - Relevant DWD Parameters, following the composition of the product and the DWD Annexes.
  - Detection of Positive List substances, and, when required, analysis of items identified for “case-by-case” examination
- Series 3 Tests
  - Enhancement of microbial growth
  - GCMS
  - Cytotoxicity

The Series 3 tests are being studied and developed under a European research programme that should be completed at the end of 2002. Standardisation work on these topics will start when the recommendations of this research programme would have been endorsed by the RG-CPDW, and may be subject to an amendment to this Mandate.

This common structure will be used to develop the suites of methods relevant to the type of material under examination.

There will be 2 distinct stages in the procedures, and generally supporting standards will be developed separately for each stage:

- Producing Migration Water Samples. The test specimen is treated with water using standardised conditioning procedures, involving some or all of the following: washing, flushing, and leaching linked to pre-defined stagnation periods that are related to the DW consumption pattern. These topics shall be agreed/fixed by the Regulators. TC164 has already partially covered this area.
- Testing the Migration Water for effects (e.g. taste), or the concentration of migrated chemicals. To date TC 230 has covered this area for taste and odour.

## 11. ORGANIC PRODUCTS – STANDARDISED PROCEDURES AND MEASUREMENT METHODS

All products composed of organic materials in contact with DW shall comply with their respective Positive Lists' requirements and shall be tested accordingly. No testing or partial testing could apply for "minor" products (please consult the "EAS-on-paper" document).

a) in principle, the EAS related supporting standards for organic products will have the following structure:

	Water Sampling Method		Analysis Method
	Transportation	Storage	
<b>Series 1 Tests</b> Odour and flavour Colour Turbidity TOC Chlorine demand	EN 1420 prEN 13052 prEN 13052 prEN 852	EN xxx EN xxx EN xxx EN xxx EN xxx	EN 1622 EN ISO 7887 EN 7027 EN 1484 prEN ISO 7393
<b>Series 2 Tests</b> DWD parameters PL substance, if required	Following DWD requirements And composition of the product		
<b>Series 3 Tests</b> GC/MS Cytotoxicity Microbial growth	Following the conclusion of the research programme as endorsed by the RG-CPDW		

b) it shall be considered that the above existing standards or pre-standards (ENs and prENs) shall/must take into account the endorsement by the RG-CPDW of all the regulatory matters that they contain. These regulatory issues could be changed so that an overall consistency between products and between materials is assured.

## 12. METALLIC PRODUCTS – STANDARDISED PROCEDURES AND MEASUREMENT METHODS

All metallic products (composed of metals and/or alloys) shall comply with the Positive List requirements and shall be tested accordingly.

a) It is understood that, like for any other materials, the composition has to be submitted by the manufacturers to the Certification authority. However, the specification writers have to establish how and when such compositions will have to be verified.

b) The tests of above defined series 1,2,3 shall apply to these products, unless otherwise proposed by the specifications writers (series 1,2) or by the research team (series 3), if and when endorsed by the RG-CPDW. Indeed, some of these tests could appear irrelevant, when taking into account the composition and/or the use of the product.

c) Concerning the maximum tolerated migration of metallic materials, the DWD thresholds shall be considered. Consequently, the products shall be tested according to their composition toward the relevant metallic parameters of the DWD Annex I Part B (antimony, arsenic, boron, cadmium, chromium, copper, lead, mercury, nickel and selenium), and following the principles of DWD Article 4.1.a: "any substances which, in numbers or concentrations, constitute a potential danger for human health". The potential interactive effects of the presence of different metals in a network shall also be taken into account.

d) The RG-CPDW requires from CEN the definition of standardised test(s), being a dynamic test ("rig test"), a static test ("sit and soak test"), or a combination of both which could be correlated with effects in real installations and operational in terms of reliability, inter-laboratory reproducibility, etc. Effects in real installations refer to a consumption pattern, from which results a stagnation scheme for the migration water (for instance, 12h+8h+4h stagnation periods over a 24h period).

e) Once a metal or an alloy will be approved, it will be incorporated in a European Positive List. It is envisaged for some commonly used metals and/or alloys to use a reference materials that would allow a comparative testing for any new product that would slightly differ in composition. CEN is required to make proposals for such comparative testing (e.g. for fittings made of alloys).

### **13. CEMENTITIOUS PRODUCTS – STANDARDISED PROCEDURES AND MEASUREMENT METHODS**

Standardised procedures and measurement methods are required for all cementitious products that come into contact with water intended for human consumption, some examples being given in Annex 1.

The following definitions characterise the products covered in this section :

- Cementitious products :

Products, as they are placed on the market, that contain an inorganic cement in sufficient proportion to act as the main binder by forming a hydrate structure which governs the performance of the products (e.g. cement mortar linings to pipes/tanks, concrete pipes, ready-mixed concrete for water-retaining structures, etc.).

- Associated, non-cementitious products :

Products (e.g. curing compounds, formwork release agents, etc.) that are applied to the surface of some cementitious products (usually concrete), directly or indirectly, during the construction process and which may remain as residues in contact with water.

The full range of products includes those that :

- are basic cementitious products (i.e. free from additives, fibres, or porous seal coatings);
- contain an additive (e.g. polymer, admixture etc.), whether inorganic or organic;
- include fibres, whether inorganic or organic;
- have a porous seal coating, as either factory applied or site applied.

The form of the products, when placed on the market, depends on the production process and includes those that are :

- factory-made (i.e. products which when sampled are hardened monoliths);
- formed-in-situ (i.e. products, such as in situ concrete, which as sampled are in the fluid state);
- site-applied (i.e. products, such as spray-applied mortar, which as sampled are also in the fluid state).

Factory-made, formed-in-situ and site-applied products shall be certified using the same test principles.

All constituents (e.g. cement, aggregates, admixtures, seal coats etc.) used in cementitious products shall comply with their respective harmonised product standards.

It is anticipated that cementitious and associated non-cementitious products, as defined above, shall be tested for, and standardised according to, the parameters given in the table below:

	Organic free cementitious products	Organic containing cementitious products	Associated, non-cementitious products		Test method (Note 1)	Analysis method (Note 2)
			Inorganic	Organic		
<b>Series 1</b>						
Odour and flavour	x	x	x	x	EN XXX- Part 1	EN 1622
Colour	x	x	x	x	EN XXX- Part 1	EN/ISO 7887
Turbidity	x	x	x	x	EN XXX- Part 1	EN/ISO 7027
TOC	x	x	x	x	EN XXX- Part 2	EN1484
Chlorine demand		x		x	EN XXX- Part 3	prEN/ISO 7393
<b>Series 2</b>						
DWD parameters	x	x	x	x	EN XXX- Part 2	See DWD
Aluminium	x	x	x		EN XXX- Part 2	98/83/EC
<b>Series 3 (NOTE 3)</b>						
GC/MS		x		x	EN XXX- Part 2	
Cytotoxicity		x			EN XXX- Part 4	
Microbial growth		x			EN XXX- Part 5	

Note 1: Test methods for producing water samples ('migration water'). Standards to be developed by CEN

Note 2: Analytical methods for testing the migration water.

Note 3: Test methods will be enabled by the ongoing research programme, after endorsement by the RG-CPDW of the final recommendations.