



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL III  
INDUSTRY  
Industrial affairs II: Capital goods industries  
**Construction**

Brussels, 6 July 1998

M 125

MANDATE TO CEN/CENELEC  
CONCERNING THE EXECUTION OF STANDARDISATION WORK  
FOR HARMONIZED STANDARDS ON

**AGGREGATES**

RELATED TO THE FOLLOWING END USES :

- 01/33 Floor beds (including suspended ground floors), roads and other trafficked areas**
- 02/33 Foundations and retaining walls**
- 03/33 Pile foundations**
- 04/33 External walls (including cladding), internal walls and partitions**
- 05/33 Floors, galleries and ceilings**
- 07/33 Roofs**
- 08/33 Frame (including chimneys and shafts)**
- 17/33 Disposal of solid waste (refuse)**
- 18/33 Drainage (including highways) and disposal of other liquids and gaseous waste**
- 22/33 Supply of gases, pressure and vacuum systems**
- 24/33 Supply of electricity**
- 26/33 Communication**
- 30/33 Circulation fixtures**
- 33/33 Storage fixtures**

**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 Directive" or "the CPD".*

*One of the aims of the Directive 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 standardisation mandates cover, at least during a first phase of the mandating programme, construction products likely to be subject to technical barriers to trade.*

*This mandate is intended to lay down provisions for the development and the quality of harmonised European standards in order, on the one hand, to make "approximation" of national laws,*

*regulations and administrative provisions (hereafter referred to as "regulations") possible and, on the other hand, to allow products conforming to them to be presumed to be fit for their intended use, as defined in the Directive.*

*In this respect, this mandate takes account of the basic principles prevailing in the regulations of Member States, particularly those described in chapters 3 and 4.2 of the Interpretative documents, to which standardisers must refer. As stated by the Directive, the responsibility 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 the CPD.*

*Chapter II Execution of the mandate. Conditions regarding the programming, development and execution of the standardisation work.*

*Chapter III Harmonised standards. Conditions regarding the content and the presentation of the harmonised standards.*

## **CHAPTER I            GROUND S**

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 Directive. It replaces any previous mandate on the same products formerly issued on a provisional base by the Commission.
2. This mandate is based on article 7 of the Directive 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 Directive). It serves to ensure the quality of the harmonised standards for products, always with reference to the state of the art, with particular reference to the fitness of the products listed in annex 1 intended to be used in **FLOOR BEDS (INCLUDING SUSPENDED GROUND FLOORS), ROADS AND OTHER TRAFFICKED AREAS, FOUNDATIONS AND RETAINING WALLS, PILE FOUNDATIONS, EXTERNAL WALLS (INCLUDING CLADDING), INTERNAL WALLS AND PARTITIONS, FLOORS, GALLERIES AND CEILINGS, FRAME (INCLUDING CHIMNEYS AND SHAFTS), DISPOSAL OF SOLID WASTE, DRAINAGE (INCLUDING HIGHWAYS) AND DISPOSAL OF OTHER LIQUIDS AND GASEOUS WASTE, SUPPLY OF GASES, PRESSURE AND VACUUM SYSTEMS, SUPPLY OF ELECTRICITY, COMMUNICATION, CIRCULATION FIXTURES, STORAGE FIXTURES**, enabling the works to satisfy the essential requirements set out in annex 1 of the Directive, provided that barriers to trade in these products exist and that the products fall within the scope of article 2.1 of the Directive;
3. 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.

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

4. Levels or classes of requirements for the products may be determined either in the Interpretative Documents or according to the procedure provided for in article 20 (2) of the Directive. In either case, where levels or classes of requirements for products are determined, guidance is given in Annex 3 to this mandate. This is not the case for classes of convenience, which are classes of product performances developed as a means of convenience for specifiers, manufacturers and purchasers. Such classes of convenience are not covered by the present mandate and should not be defined within the harmonised standard. Nevertheless, the results of the determination of the product characteristics may be expressed using classes of convenience introduced by European standards. Articles 3.2 and 6.3 of CPD do not apply to such classes.
5. The harmonised 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. Declaration of performance for such a characteristic, in this case, must not be imposed on the manufacturer if he does not wish to declare it.
6. Indications regarding the documents which should be taken into account to inform standardisers and manufacturers on national and harmonised legislation on substances classified as dangerous are given in Annex 4.

## CHAPTER II EXECUTION OF THE MANDATE

1. CEN/CENELEC will present the Commission with a detailed work programme, at the latest, **three months after approval of 83/189 Committee.**
2. The work programme should identify clearly the list of harmonised standards to be developed. For each harmonised standard it should :
  - indicate the name(s) of the product(s) to be covered;
  - define the characteristics, durability aspects, intended uses and the forms and materials to be covered (in accordance with Annexes 1, 2 and 3 of this mandate);
  - attach the list of supporting documents (e.g. work items on test methods, ...);
  - justify the timetable foreseen for its finalisation; and
  - identify the Technical Committee(s) responsible for the work.
3. Clear differentiation should be made between the item to become the harmonised standard for the product and the items to be used as supporting documents.
4. When a supporting test standard for one characteristic does not exist or is not in the work programme of the TC, a clear statement should be presented indicating whether CEN is able to produce one or not.
5. Any proposals for the addition of products, intended uses and materials and forms not included in the mandate but considered relevant by the TC should be presented separately from the work programme for further analysis by the Commission services. Standards prepared for products outside this mandate will not achieve the status of harmonised standards. 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.

6. Any proposal for the addition of characteristics and durability aspects not included in the mandate but considered relevant by the TC should be proposed in a special chapter of the work programme for further analysis by the Commission services.
7. Where a classification system of the product performances is envisaged in Annex 3 of the present mandate, CEN/CENELEC are requested to make an appropriate proposal for its implementation.
8. CEN/TCs must give a technical answer for the determination of the characteristics of the mandate taking into account the conditions stated below; test methods suggested must be directly related to the relevant required characteristic and must not make reference to determination methods for characteristics not required by the mandate. Durability requirements should be dealt with in the framework provided by the state of the art at present.
9. Reference to test/calculation methods must be in accordance with the harmonisation aimed at. 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.

Testing and/or calculation methods shall have, whenever possible, a horizontal character covering the widest possible range of products

10. Within the work programme, CEN/CENELEC will also specify those cases where the performance-based approach will not be followed in the harmonised standard and will give the relevant justification.
11. After examination of the work programme and consultations with CEN/CENELEC, 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 or supporting standards.
12. The terms of reference of this mandate may be subject to modification or addition, if necessary. Acceptance of the work programme by the Commission services does not imply acceptance of all the WIs listed as supporting standards. TCs will need to demonstrate the direct link between WIs and the needs for harmonisation of the products, intended uses and characteristics given in the mandate. Nor does acceptance exclude the possibility for further WIs to be added by CEN, in order to fully respond to the terms of the mandate
13. Representatives of the authorities responsible for national regulations have the right and shall be able to participate in the activities of CEN/CENELEC through their national delegations and to present their points of view at all stages of the drafting process of the harmonised standards.
14. The Commission may participate in standardisation activities as observer and has the right to receive all relevant documents.
15. CEN/CENELEC will immediately inform the Commission of any problem relating to the carrying out of the mandate and will present an annual progress report on work within the framework of the mandate.
16. The progress report will include a description of work carried out and information on any difficulties being met, whether political or technical, with particular reference to those that might

lead the authorities of a Member State to raise objections or to resort to article 5.1 of the Directive.

17. The progress report will be accompanied by the latest drafts of each standard under the mandate and by updated reports on any subcontracted work.
18. Acceptance of this mandate by CEN/CENELEC 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.
19. Acceptance of this mandate by CEN/CENELEC can take place only after the work programme has been endorsed by the Commission services.
20. CEN/CENELEC will develop the draft harmonised European standards and of the relevant supporting standards on the basis of the work programme and will inform the Commission in good time that the draft is being circulated for public comment.
21. CEN/CENELEC will present the final drafts of the harmonised European standards and of the relevant supporting standards to the Commission services for confirmation of compliance with this mandate at the latest in accordance with the timetable agreed between CEN/CENELEC and the Commission and referred to in point II.2.d).
22. CEN/CENELEC members will publish the standards transposing the harmonised European standards at the latest 6 months after a positive vote in CEN/CENELEC. National standards covering the same scope will continue to be applicable until the date agreed between CEN/CENELEC and the Commission in accordance with point II.2.d)

### **CHAPTER III. HARMONISED STANDARDS**

1. Harmonised standards shall be prepared to allow those products listed in Annexes 1 and 2 to be able to demonstrate the satisfaction of the essential requirements. One of the purposes of the Directive being to remove barriers to trade, the standards deriving from it will therefore be expressed, as far as practicable in product performance terms (art. 7.2 of the Directive), having regard to the Interpretative Documents.
2. The harmonised standard will contain :
  - A detailed scope and field of application
  - A detailed description of the product or family of products covered and the relevant intended uses of the different products;
  - 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 essential requirements;
  - The methods (calculation, test methods or others) or a reference to a standard containing the methods for the determination of such characteristics;
  - Guidance on the characteristics that have to be stated within the labelling that will accompany the CE marking (depending on the intended use of the product) and on the way of expressing the determined values of these characteristics;

- The classification system and the levels for the above values of characteristics, if required by the mandate;
  - The system for attestation of conformity as required in annex 3 of the mandate and the corresponding specific provisions for the evaluation of conformity.
3. A minimum or a maximum level of a given characteristic that has to be met by the family of products or a product may be identified by the harmonised standard only if required by agreement of Member States expressed by positive vote under the procedure of article 20 .
  4. As far as possible, each standard will make reference to performances common to other standards developed under mandate and which constitutes a cohesive and compatible group of harmonised European standards developed in parallel. CEN/CENELEC shall ensure consistency within the whole package.
  5. A producer not wishing to meet a non-mandated European standard will be able to use the CE marking on his product by referring only to the relevant harmonised standard. On the other hand, if a non-mandated standard includes the entire content of the harmonised standard, compliance with the former standard will also give a presumption of conformity to the harmonised standard and will enable the bearing of the CE marking.

In the latter case, an appropriate system should be established in the European standard in order to clearly distinguish the CPD-related content from the remaining part of the standard.

6. Harmonised standards must permit construction products which allow works to meet the essential requirements and which are produced and used lawfully in accordance with technical traditions warranted by local climatological and other conditions to continue to be placed on the market.
7. The essential requirements being expressed in terms of performance of the works, the characteristics of the products should be also expressed in terms of performance so that, in referring to the harmonised European standards, the regulations may "approximate" evolving in terms of "performance requirements". As far as practicable and depending on the intended use mentioned in the annexes of this mandate, the standard shall include a definition of the durability in term of performance of the declared values of the product characteristics as well as suitable methods for its evaluation against the actions listed in Annex 2. If the durability is expressed in terms of classes of periods, articles 3.2 and 6.3 of the CPD will not apply.
8. The relevant systems for attestation of conformity, according to Article 13.3 and Annex III of the Directive, are listed in annex 3. For the establishment of the corresponding specific provisions of evaluations of conformity, the harmonised standard will take into account :
  - the different intended uses of the product mentioned in the annexes of this mandate and, if any, the different levels or classes of performance;
  - cases of individual (non series) production according to Article 13.5 of the Directive;
  - the recommendations of paragraph 3 of Annex 3
9. The label accompanying the CE marking will list all the characteristics to be declared according to the declared intended uses mentioned in the annexes of this mandate. 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.

ANNEX 1  
FIELD OF APPLICATION

**AGGREGATES**

To be used in:

THE PREPARATION OF CONCRETE, MORTAR, GROUT AND MIXES FOR CONSTRUCTION AND FOR THE MANUFACTURE OF CONSTRUCTION PRODUCTS AS WELL AS OTHER BOUND AND UNBOUND MIXTURES FOR USE IN ROADS AND OTHER CIVIL ENGINEERING WORKS

- 01/33 Floor beds (including suspended ground floors), roads and other trafficked areas
- 02/33 Foundations and retaining walls
- 03/33 Pile foundations
- 04/33 External walls (including cladding), internal walls and partitions
- 05/33 Floors, galleries and ceilings
- 07/33 Roofs
- 08/33 Frame (including chimneys and shafts)
- 17/33 Disposal of solid waste (refuse)
- 18/33 Drainage (including highways) and disposal of other liquids and gaseous waste
- 22/33 Supply of gases, pressure and vacuums system
- 24/33 Supply of electricity
- 26/33 Communications
- 30/33 Circulation fixtures
- 33/33 Storage fixtures

FORMS	MATERIAL <sup>2</sup>	PRODUCTS
Granular Formless	<p><b>Natural</b> E.g. Stone (round or crushed, ground) Sand Gravel Lava and tuff</p> <p><b>Manufactured or by-products of industrial processes</b> E.g. Ashes Clays Slags Vermiculite Perlite Brightening materials Incinerator residues</p> <p><b>Recycled</b> E.g. Concrete Masonry Asphalt</p>	<p><b>Aggregates</b> for the preparation of - concrete, mortar and grout - bituminous mixtures and surface treatments - unbound and hydraulically bound mixtures</p> <p><b>Armourstones</b></p> <p><b>Railway ballast</b></p> <p><b>Fillers</b> for the preparation of - concrete, mortar and grout - bituminous mixtures and surface treatments</p>

<sup>2</sup> Material from these groups can be used for aggregates and fillers on its own or in combination



## 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/CENELEC should select the subset of characteristics applicable to a particular product from the full set provided.***

<b>AGGREGATES</b>
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To be used in:

THE PREPARATION OF CONCRETE, MORTAR, GROUT AND MIXES FOR CONSTRUCTION AND FOR THE MANUFACTURE OF CONSTRUCTION PRODUCTS AS WELL AS OTHER BOUND AND UNBOUND MIXTURES FOR USE IN ROADS AND OTHER CIVIL ENGINEERING WORKS

**01/33** Floor beds (including suspended ground floors), roads and other trafficked areas ; **02/33** Foundations and retaining walls ; **03/33** Pile foundations ; **04/33** External walls (including cladding), internal walls and partitions ; **05/33** Floors, galleries and ceilings ; **07/33** Roofs ; **08/33** Frame (including chimneys and shafts) ; **17/33** Disposal of solid waste (refuse) ; **18/33** Drainage (including highways) and disposal of other liquids and gaseous waste ; **22/33** Supply of gases, pressure and vacuums system ; **24/33** Supply of electricity ; **26/33** Communications ; **30/33** Circulation fixtures ; **33/33** Storage fixtures

#### Family

<b>AGGREGATES</b>
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<p>Granular material (natural, manufactured, by-products of industrial processes or recycled) According to their density, aggregates can be light-, normal- and heavy weight. Definition for identification of aggregates should specify source and type.</p>
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#### Subfamily

<b>1. AGGREGATES FOR CONCRETE, MORTAR AND GROUT</b>
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<p>Natural, manufactured, by-products of industrial processes or recycled aggregates used for the preparation of concrete and grout (see mandate for <i>concrete</i>), mortar (see mandate for <i>masonry and related products</i> for masonry and rendering/plastering mortar) for use in e.g. : - buildings, roads and other civil engineering works</p>
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Performance characteristics of the AGGREGATES FOR CONCRETE, MORTAR AND GROUT to be covered by the harmonised standard are:

ER	PERFORMANCE CHARACTERISTICS	Durability
1+4	<ul style="list-style-type: none"> <li>- Particle shape, size and density</li> <li>- Percentage of crushed particles</li> <li>- Cleanliness</li> <li>- Resistance to fragmentation / crushing</li> <li>- Resistance to polishing / abrasion / wear</li> <li>- Composition / content (e.g. chloride, sulphur, ..., as relevant)</li> <li>- Volume stability</li> <li>- Water absorption</li> </ul>	<p><b>Y</b> (Against freeze-thaw, weathering de-icing salts alkali, ..., as relevant)</p>
2		
3	<ul style="list-style-type: none"> <li>- Emission of radioactivity (for aggregates from radioactive sources intended for use in concrete in buildings)</li> <li>- Release of heavy metals</li> <li>- Release of polyaromatic carbons</li> <li>- Release of other dangerous substances*</li> </ul>	
5+6		

\* In particular, those dangerous substances defined in Council Directive 76/769/EEC, as amended.

Subfamily

**2 AGGREGATES FOR BITUMINOUS MIXTURES AND SURFACE TREATMENTS**

Natural, manufactured, by-products of industrial processes or recycled aggregates used for the preparation of, or as add-ins to, bituminous mixtures and surface treatments for use in e.g. :  
 - construction of roads and surface treatment of roads and other civil engineering works

Performance characteristics of the AGGREGATES FOR BITUMINOUS MIXTURES AND SURFACE TREATMENTS to be covered by the harmonised standard are:

ER	PERFORMANCE CHARACTERISTICS	Durability
1+4	<ul style="list-style-type: none"> <li>- Particle shape, size and density</li> <li>- Cleanliness</li> <li>- Affinity to bituminous binders</li> <li>- Percentage of crushed particles / broken surfaces</li> <li>- Resistance to fragmentation / crushing</li> <li>- Resistance to polishing / abrasion / wear / attrition</li> <li>- Resistance to thermal shock</li> <li>- Volume stability</li> <li>- Composition / content (e.g. sulphur, water sensitive and swellable minerals, ..., as relevant)</li> </ul>	<p><b>Y</b>                      (Against weathering, high temperatures, freeze-thaw, wear from studded tyres, ..., as relevant)</p>
2		
3	<ul style="list-style-type: none"> <li>- Emission of radioactivity (for aggregates from radioactive sources intended for use in concrete in buildings)</li> <li>- Release of heavy metals</li> <li>- Release of polyaromatic carbons</li> <li>- Release of other dangerous substances*</li> </ul>	
5+6		

\* In particular, those dangerous substances defined in Council Directive 76/769/EEC, as amended.

Subfamily

**3 AGGREGATES FOR UNBOUND AND HYDRAULICALLY BOUND MIXTURES**

Natural, manufactured, by-products of industrial processes or recycled aggregates used for the preparation of unbound and hydraulically bound mixtures, excluding concrete, for use in e.g. :  
 - road construction and other civil engineering works; and  
 - arrester beds

Performance characteristics of the AGGREGATES FOR UNBOUND AND HYDRAULICALLY BOUND MIXTURES to be covered by the harmonised standard are:

ER	PERFORMANCE CHARACTERISTICS	Durability
1+4	<ul style="list-style-type: none"> <li>- Particle shape, size and density</li> <li>- Cleanliness</li> <li>- Percentage of crushed particles / broken surfaces</li> <li>- Resistance to fragmentation / crushing</li> <li>- Volume stability</li> <li>- Water absorption / suction</li> <li>- Composition / content (e.g. sulphur, clay, water sensitive and swellable minerals, ..., as relevant)</li> <li>- Resistance to attrition</li> </ul>	<p><b>Y</b>                      (Against weathering, freeze-thaw, ..., as relevant)</p>
2		
3	<ul style="list-style-type: none"> <li>- Release of heavy metals by leaching</li> <li>- Release of other dangerous substances*</li> </ul>	
5+6		

\* In particular, those dangerous substances defined in Council Directive 76/769/EEC, as amended.

**Subfamily**

**4 ARMOURSTONES**

Natural, manufactured, by-products of industrial processes or recycled aggregates for unbound use in e.g. :  
 - hydraulic and embankment structures; and  
 - other civil engineering works

Performance characteristics of the ARMOURSTONES to be covered by the harmonised standard are:

ER	PERFORMANCE CHARACTERISTICS	Durability
1+4	- Particle shape, size and density - Resistance to fragmentation / crushing - Resistance to breakage - Resistance to attrition	<b>Y</b> <i>(Against weathering, freeze-thaw, ..., as relevant)</i>
2		
3	- Release of dangerous substances*	
5		
6		

\* In particular, those dangerous substances defined in Council Directive 76/769/EEC, as amended.

**Subfamily**

**5 RAILWAY BALLAST**

Crushed natural aggregates, manufactured, by-products of industrial processes or recycled aggregates for unbound use in e.g. :  
 - railway works.

Performance characteristics of the RAILWAY BALLAST to be covered by the harmonised standard are:

ER	PERFORMANCE CHARACTERISTICS	Durability
1+4	- Particle shape, size and density - Resistance to fragmentation - Resistance to attrition - Electric conductivity - Cleanliness	<b>Y</b> <i>(Against weathering, freeze-thaw, ..., as relevant)</i>
2		
3	- Release of dangerous substances*	
5		
6		

\* In particular, those dangerous substances defined in Council Directive 76/769/EEC, as amended.

**Family**

**FILLERS**

Fine granular powder produced from natural, manufactured, by-products of industrial processes or recycled materials.

**Subfamily**

**6 FILLERS FOR BITUMINOUS MIXTURES AND SURFACE TREATMENTS**

Fillers, produced from natural, manufactured, by-products of industrial processes or recycled materials, for use in e.g. :  
 - construction of roads and surface treatment of roads; and  
 - other civil engineering works

Performance characteristics of the FILLERS FOR BITUMINOUS MIXTURES AND SURFACE TREATMENTS to be covered by the harmonised standard are:

ER	PERFORMANCE CHARACTERISTICS	Durability
1+4	<ul style="list-style-type: none"> <li>- Fineness / Particle size and density</li> <li>- Stiffening properties</li> <li>- Water solubility and susceptibility</li> <li>- Cleanliness</li> <li>- Porosity / Volume of voids</li> <li>- Loss of ignition (for ashes only)</li> </ul>	<p><b>Y</b> (Against freeze-thaw, ..., as relevant)</p>
2		
3	- Release of dangerous substances*	
5		
6		

\* In particular, those dangerous substances defined in Council Directive 76/769/EEC, as amended.

**Subfamily**

**7 FILLERS FOR CONCRETE, MORTAR AND GROUT<sup>3</sup>**

Fillers, produced from natural, manufactured by-products of industrial processes or recycled materials. Fillers are used as a component of aggregates for concrete, mortar and grout, and they are by definition inert (non-reactive). They are used to correct the aggregates in the case of a deficiency in the fine particle fraction. For use in e.g. :  
 - buildings, roads and other civil engineering works; and  
 - the manufacturing of precast concrete products

Performance characteristics of the FILLERS FOR CONCRETE, MORTAR AND GROUT to be covered by the harmonised standard are:

ER	PERFORMANCE CHARACTERISTICS	Durability
1+4	<ul style="list-style-type: none"> <li>- Fineness / Particle size and density</li> <li>- Composition / content (e.g. expanding clay compounds, sulphur containing compounds, chloride and other corrosion promoting substances, ..., as relevant)</li> <li>- Cleanliness</li> <li>- Soundness / Volume stability</li> <li>- Loss of ignition (for ashes only)</li> </ul>	<p><b>Y</b> (Against freeze-thaw, ..., as relevant)</p>
2		
3	- Release of dangerous substances*	
5		
6		

\* In particular, those dangerous substances defined in Council Directive 76/769/EEC, as amended.

<sup>3</sup> See also the mandate to CEN for concrete, mortar, grout and related products

ANNEX 3  
ATTESTATION OF CONFORMITY

<b>AGGREGATES FOR USES WITHOUT HIGH SAFETY REQUIREMENTS<sup>4</sup> (1/2)</b>
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**1. Levels and classes for product performances**

- 1.1 According to article 3.2 of the CPD and Clause 1.2.1 of the IDs, a classification of product performance has been identified as the means of expressing the range of requirement levels of the works in respect of **reaction to fire**.

Regarding reaction to fire, CEN/CENELEC are requested to follow the Commission Decision 94/611/EC [O.J. L 241 of September 1994] and make reference to the standard(s) to be prepared under Commission mandate to CEN/CENELEC "Horizontal complement to the mandates in respect of reaction to fire" in dealing with reaction to fire in the specific harmonised product standards to be developed under this mandate.

- 1.2 Reaction to fire is a risk for which the need for a classification system has been identified for the time being.

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 Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

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<sup>4</sup> Safety requirements are to be defined by Member States in their national laws, regulations and administrative provisions.

## 2. Systems of attestation of conformity

- 2.1 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 harmonised standard(s):

Product	Intended use	Level/s or class/es	Attestation of conformity system
<b>Aggregates for</b> - concrete, mortar and grout - bituminous mixtures and surface treatments - unbound and hydraulically bound mixtures	for roads and other civil engineering works	-	<b>4</b>
<b>Armourstones</b>	for hydraulic structures and other civil engineering works	-	<b>4</b>
<b>Railway ballast</b>	for railway works	-	<b>4</b>
<b>Fillers for</b> - concrete, mortar and grout - bituminous mixtures and surface treatments	for roads and other civil engineering works	-	<b>4</b>
System 4: See CPD Annex III.2.(ii), Third possibility			

## 3. Conditions to be applied by CEN/CENELEC 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 the "no performance determined" case, 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.

## AGGREGATES FOR USES WITH HIGH SAFETY REQUIREMENTS<sup>5</sup> (2/2)

### 1. Levels and classes for product performances

1.1 [text as for family (1/2)]

1.2 [text as for family (1/2)]

### 2. Systems of attestation of conformity

2.1 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 harmonised standard(s):

Product	Intended use	Level/s or class/es	Attestation of conformity system
<b>Aggregates for</b> - concrete, mortar and grout - bituminous mixtures and surface treatments - unbound and hydraulically bound mixtures	for roads and other civil engineering works	-	2+
<b>Armourstones</b>	for hydraulic structures and other civil engineering works	-	2+
<b>Railway ballast</b>	for railway works	-	2+
<b>Fillers for</b> - concrete, mortar and grout - bituminous mixtures and surface treatments	for roads and other civil engineering works	-	2+
System 2+: See CPD Annex III.2.(ii), First possibility, including certification of the factory production control by an approved body on the basis of initial inspection of factory and of factory production control as well as of continuous surveillance assessment and approval of factory production control			

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<sup>5</sup> Safety requirements are to be defined by Member States in their national laws, regulations and administrative provisions.

**3. Conditions to be applied by CEN/CENELEC 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 the "no performance determined" case, 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.



## ANNEX 4

### DANGEROUS SUBSTANCES

<b>AGGREGATES</b>
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European Technical Specifications must be adopted taking into account the necessary legislation on substances classified as dangerous.

This results from the Interpretative Documents, where it is noted in the introduction note to all six Interpretative Documents, 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 material to be used for construction products, and which are regulated for reasons not related to the incorporation into the works of the construction products.

In order to permit technical specification writers to take into account the necessary legislation, a working document was elaborated by the Commission services (doc. CONSTRUCT 95/148 Rev.1 of January 4, 1996). Specification writers should use this document as a guide but must also take account of any other relevant legislation or dangerous substances which the working document does not yet include.



**EUROPEAN COMMISSION**  
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL  
New Approach Industries, Tourism and CSR  
**Construction, Pressure Equipment, Metrology**

Brussels, 29<sup>th</sup> June 2010

**M/125 rev.1 EN**

## **AMENDMENT TO:**

MANDATE TO CEN/CENELEC

CONCERNING THE EXECUTION OF STANDARDISATION WORK

FOR HARMONISED STANDARDS ON

**AGGREGATES**

**(M/125)**

### **1. EXPLANATORY NOTE**

The Construction Products Directive (89/106/EC) – CPD covers six essential requirements for construction products. In the original mandate and work programme these aspects were only partly taken into consideration, mostly due to a lack of data on existing requirements and/or lack of technical instruments to be harmonised in European standards.

Construction products could emit or contain substances that have been defined as “dangerous substances” under European Directives and national regulations. While the emission (or the content) shall be below any existing European and/or national threshold values (where the product is placed on the market), manufacturers and authorities need transparent and understandable schemes in place for the declaration of product performance in this respect in order to determine conformance of the product with these regulatory requirements. This requires harmonised standards for the declaration of the potential release (or presence in those cases where a substance is banned or content where it is not possible to measure releases) of dangerous substances from construction products. The test methods to support this declaration will be provided by CEN TC 351 following the requirements of the Commission’s mandate M 366.

To identify substances to be assessed<sup>1</sup>, CEN TCs have to consider the current versions of EU Directives and notified national regulations.

Regulatory requirements to be referred to can be found:

- Commission's database on dangerous substances<sup>2</sup>;
- Indicative list indoor air/soil and (ground) water (DS 051)
- Annexes of amendment of mandate M/125

To facilitate the work of CEN product TCs, the attached annexes provide an inventory of substances/materials that are considered as the most relevant<sup>3</sup> in the first phase for products covered under mandate M/103. It remains to the product TC to select the most efficient approach of identifying dangerous substances regulated and relevant for their specific products<sup>4</sup>.

However, the financial and technical burden of testing could in many cases be avoided if a clear definition and product declaration of a product and/or its intended use is introduced in a product standard. This could allow manufacturers and authorities to avoid any testing or to focus on a few relevant substances/components/materials for testing, while they could exclude certain substances/components/materials from their test schemes<sup>5</sup>.

## 2. OBJECTIVE

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<sup>1</sup> Any substances identified in the original mandate M/125 have also to be included in the work programme following this amendment.

<sup>2</sup> <http://ec.europa.eu/enterprise/construction/cpd-ds/>

<sup>3</sup> The term "most relevant" for substances/materials in the inventory as well as in the selection and reply of each product TC highlights the importance of *a fast and pragmatic approach* two step approach for the first generation of product standards covering ER 3. The focus in the inventory as well as in the selection and reply by CEN TCs is on the substances/materials which are

- most likely present in a product or will most likely emit form products;
- have been identified by regulators as risk for health and the environment;

To avoid that the standardisation work will be unnecessarily delayed by trying to cover less likely or less dangerous risks in the first generation, the first generation is supposed to cover the *majority* of risks and substances/materials, but allows for adaptations in subsequent five year reviews of the product standards.

<sup>4</sup> However, the manufacturer, or his agent established in the Community, shall be responsible for the attestation that products are in conformity with the requirements of a technical specification. (Art.13 of the CPD)

<sup>5</sup> Following this approach not all substances listed in a mandate have to be tested. Some substances can be excluded by description (i.e. "substance xy is not used in concentrations above 0.1 % w/w")

The objective of this mandate is for CEN to amend existing harmonised product standards (or standards under development) to cover ER3 requirements<sup>6</sup> to an extent that will allow CE marked construction products to be placed on national markets without additional national requirements.

*Note: It should be stressed that this exercise shall not duplicate the ongoing work in TC 351 and its links to product TCs. But to avoid later misunderstandings and complications that might lead to delayed publications of harmonised product standards and/or the use of CE marking the dialogue between specification writers and the Commission/regulators/experts should be facilitated and strengthened.*

### **3. DESCRIPTION OF THE MANDATED WORK**

The attached annex provides an overview on national notified regulatory requirements that have been linked by several experts of the Commission's expert group on dangerous substances to products covered under mandate M/125.

CEN (TC 154) has to assess the list and to take it completely into consideration when describing and justifying its selection of substances and their relevance in its work programme, in particular on the following aspects:

- If these substances may be present in products covered by mandate M/125 and in all existing harmonised product standards or harmonised product standards under development;
- If these substances are likely to emit from the above mentioned products and if these emissions are close to existing limit values in regulations referred to in this document<sup>7</sup>;
- If there is available data, particularly where the above mentioned products have been tested in the past on either content or emission of these substances by national authorities/bodies<sup>8</sup>;

*Note: The work programme of the product TC will be used for further discussion in the EGDS between the Commission, national experts and experts of the product TC and TC 351.*

CEN has to provide in existing harmonised product standards or harmonised product standards under development either

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<sup>6</sup> These ER-requirements include that the products put on a national market can fulfil the national legal requirements.

<sup>7</sup> The possibility of excluding products, components or substances from testing will be dealt with in detail in another document describing a system of defining products "without testing" or "without further testing".

<sup>8</sup> If products have not been subject to testing for dangerous substances (or specific substances now mentioned in this document have not been assessed in the past) will be helpful to assess the priority given by regulators or the lack of useful technical instruments for the assessment, but does not necessarily indicate that Member State authorities might not insist on these specific requirements during the development of a standard or *after* it has been finalised. Therefore, each substance should be assessed carefully by the TC and in case of doubt clarification should be requested from the Commission.

- clear and transparent definitions of products<sup>9</sup> that will make further requirements for testing for dangerous substances obsolete or
- a set of clear and transparent requirements for product which will be laid down in product standards for these specific product families or relevant sub-families.

#### 4. EXECUTION OF THE MANDATE

The standards resulting from this amended mandate will have to be delivered by no later than 12 months after the adoption of technical specifications developed under the mandate M/366.

After formal acceptance of the mandate, CEN will present to the Commission within 2 months a detailed proposal for the Work Programme. Having regard to the scope of this mandate this Work Programme will include

- a selection and clear indication of substances/materials indicated in the annexes of this mandate which are considered as relevant in products covered by mandate M/125, or a justification for excluding substances/materials of the attached annex from standardisation work in the relevant product TC;
- a list of all product standards considered to require declaration categories for the potential release or content of regulated dangerous substances to enable fulfilment of regulatory requirements;
- the timetable for the development and the publication of each amended standard; if not all regulated dangerous substances can be dealt with in one phase/generation, it should be explained how and when to handle the other substances and which steps still need to be taken.

*Note: Due to regulatory requirements (e.g. the content of restricted and banned substances in construction products), content<sup>10</sup> measurement/test standards may also be considered.*

*Content may also be used as screening method in FPC or as part of a “Without Further Testing” scenario.*

After examination of the Work Programme and consultations with CEN, the Commission will endorse the timetable and the list of measurement/test standards or parts of measurement/test standards, which meet the terms of this mandate.

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<sup>9</sup> If necessary with regard to materials, constituents, admixtures, etc.

<sup>10</sup> For other regulations than the CPD the content of substances in a product/materials is relevant. Therefore the characteristic to be considered can also, as pointed out in the Guidance Paper H, be the content of the dangerous substance in the construction product, when this is the only practicable or legally correct solution (e.g. when waste is used). Although the CPD deals in particular with the emission of dangerous substances, measurement methods based on content may help for example with regard to incoming materials (e.g. any material used in the production process, treated or not, be it raw materials or materials resulting from any previous use or production).

The terms of reference of the mandate may be subject to modification or addition, if necessary, following the consultation of the Standards and Technical Regulations Committee, where appropriate. Especially, when the Commission has endorsed the Work Programme, the annex will be updated with the corresponding parts of the endorsed Work Programme.

The Commission<sup>11</sup> may participate in standardisation activities as an observer and has the right to receive all relevant documents.

CEN will immediately inform the Commission of any problem relating to the carrying out of the mandate from within the Technical Committees.

In an annual review meeting CEN/CENELEC will inform the Commission about the progress of the work.

The formal acceptance of this mandate by CEN will initiate the standstill procedure referred to in article 7 of the European Parliament and the Council Directive 98/34/EC of 22 June 1998.

CEN will present the final drafts of the harmonised European product standards to the Commission for confirmation of compliance with this mandate at the latest in accordance with the timetable agreed between CEN and the Commission.

The text of the European standards shall be delivered to the Commission in the three working languages of CEN (English, French, German).

CEN will provide the titles of the standards in all the official languages of the European Union.

### **Organisations to be involved**

As appropriate, CEN will invite the representative organisations of consumers' interests (ANEC), environmental protection (ECOS), workers (ETUI-REHS) and small and medium-size enterprises (NORMAPME) to take part in the standardisation work.

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<sup>11</sup> This could also include assistance from the European Commission expert group on regulated dangerous substances.

Annex I to the amendment to Mandate M/125 "Aggregates" with respect to ER3 related requirements

**NOTE: this is a general list of notified regulations which may relate to regulated dangerous substances and ER 3 but which also deals with other issues. TC 154 is asked to check through these and establish which regulations and which substances or properties are relevant to this specific task and to cover them in its standards. Further, in the below list of regulations, the different aggregate types are not always aligned with the definitions of types in the aggregate product standards so TC 154 is asked to adjust as appropriate.**

Harmonised Standards under M/125 cited in the Official Journal of the European Union				
EN Number	Standard Title	Regulated field(s) of application	Requirements	Notified regulations.
EN 13139	Aggregates for mortar	bound use in mortar for structural engineering	<p><b>for recycled aggregates from crushed concrete and bricks</b></p> <p>Release: pH / electrical conductivity / chloride (Cl) / sulphate (SO<sub>4</sub>) / arsenic (As) / lead (Pb) / cadmium (Cd) / chromium (Cr) / copper (Cu) / nickel (Ni) / mercury (Hg) / zinc (Zn) / phenol</p> <p>Content: hydrocarbons / PAH / EOX / PCB / ammonium-N / nitrite-N</p> <p><b>for other recycled aggregates and certain manufactured aggregates, (such as steel slag, municipal waste incineration slag, fly ash and bottom ash from co-combustion) additionally</b></p> <p>Release: turbidity / tendency to produce foam / AOX / antimony (Sb) / barium (Ba) / boron (B) / cobalt (Co) / chromium VI / molybdenum (Mo) / selenium (Se) / thallium (Tl) / tin (Sn) / vanadium (V) / cyanide, (CN-) / fluoride (F-) / PAH / naphthalene and methylnaphthalenes / highly volatile halogenated hydrocarbons / 1,2-dichloroethane / tri- and tetrachloroethene / chloroethene (vinyl chloride) / alkylated benzenes / benzene / ethylbenzene / toluene / xylenes / MTBE / nonylphenol / chlorinated phenols / hexachlorobenzene / chlorobenzenes / epichlorohydrin</p> <p>Content: TOC / arsenic / lead / barium / cadmium / chromium (total) / cobalt / molybdenum / nickel / mercury / selenium / thallium / tin / vanadium / zinc / chloride / cyanide / fluoride / sulphate / PAH / / PCDDs and PCDFs / highly volatile halogenated hydrocarbons / PCBs / hydrocarbons / benzene /</p>	2005-424-D, 2006-90-D, 2007-653-A

			ethylbenzene / toluene / xylenes / radioactivity	
EN 13055-1	Lightweight aggregates - Part 1: Lightweight aggregates for concrete, mortar and grout	bound use in concrete and mortar for civil and structural engineering (excluding public road construction)	<p><b>for recycled aggregates from crushed concrete and bricks</b></p> <p>Release: pH / electrical conductivity / chloride (Cl) / sulphate (SO<sub>4</sub>) / arsenic (As) / lead (Pb) / cadmium (Cd) / chromium (Cr) / copper (Cu) / nickel (Ni) / mercury (Hg) / zinc (Zn) / phenol</p> <p>Content: hydrocarbons / PAH / EOX / PCB / ammonium-N / nitrite-N</p> <p><b>for other recycled aggregates and certain manufactured aggregates, (such as steel slag, municipal waste incineration slag, fly ash and bottom ash from co-combustion) additionally</b></p> <p>Release: turbidity / tendency to produce foam / AOX / antimony (Sb) / barium (Ba) / boron (B) / cobalt (Co) / chromium VI / molybdenum (Mo) / selenium (Se) / thallium (Tl) / tin (Sn) / vanadium (V) / cyanide, (CN-) / fluoride (F-) / PAH / naphthalene and methylnaphthalenes / highly volatile halogenated hydrocarbons / 1,2-dichloroethane / tri- and tetrachloroethene / chloroethene (vinyl chloride) / alkylated benzenes / benzene / ethylbenzene / toluene / xylenes / MTBE / nonylphenol / chlorinated phenols / hexachlorobenzene / chlorobenzenes / epichlorohydrin</p> <p>Content: TOC / arsenic / lead / barium / cadmium / chromium (total) / cobalt / molybdenum / nickel / mercury / selenium / thallium / tin / vanadium / zinc / chloride / cyanide / fluoride / sulphate / PAH / / PCDDs and PCDFs / highly volatile halogenated hydrocarbons / PCBs / hydrocarbons / benzene / ethylbenzene / toluene / xylenes / radioactivity</p>	2005-424-D, 2006-90-D, 2007-653-A



EN Number	Standard Title	Regulated field(s) of application	Requirements	Notified regulations.
EN 12620	Aggregates for concrete	bound use in road construction	<p><b>recycled aggregates and manufactured aggregates</b></p> <p>Release: pH / electrical conductivity / ammonium-N / nitrite-N / chloride (Cl) / sulphate (SO<sub>4</sub>) / cyanide / fluoride (F) / AOX / DOC / PAH (EPA) / phenol / arsenic (As) / lead (Pb) / cadmium (Cd) / chromium (Cr) / chromate / copper (Cu) / nickel (Ni) / mercury (Hg) / vanadium (V) /</p> <p>zinc (Zn) / PAH / phenol / mineral oil hydrocarbons</p> <p>Content: EOX, TOC, lead, cadmium, chromium (total), copper, zinc, PAH, hydrocarbons</p>	2004-71-D, 1999-263-A, 2007-385-A
		bound use in concrete for civil and structural engineering (excluding public road construction)	<p><b>for recycled aggregates from crushed concrete and bricks</b></p> <p>Release: pH / electrical conductivity / chloride (Cl) / sulphate (SO<sub>4</sub>) / arsenic (As) / lead (Pb) / cadmium (Cd) / chromium (Cr) / copper (Cu) / nickel (Ni) / mercury (Hg) / zinc (Zn) / phenol</p> <p>Content: hydrocarbons / PAH / EOX / PCB / ammonium-N / nitrite-N</p> <p><b>for other recycled aggregates and certain manufactured aggregates, (such as steel slag, municipal waste incineration slag, fly ash and bottom ash from co-combustion) additionally</b></p> <p>Release: turbidity / tendency to produce foam / AOX / antimony (Sb) / barium (Ba) / boron (B) / cobalt (Co) / chromium VI / molybdenum (Mo) / selenium (Se) / thallium (Tl) / tin (Sn) / vanadium (V) / cyanide, (CN<sup>-</sup>) / fluoride (F<sup>-</sup>) / PAH / naphthalene and methylnaphthalenes / highly volatile halogenated hydrocarbons / 1,2-dichloroethane / tri- and tetrachloroethene / chloroethene (vinyl chloride) / alkylated benzenes / benzene / ethylbenzene / toluene / xylenes / MTBE / nonylphenol / chlorinated phenols / hexachlorobenzene / chlorobenzenes / epichlorohydrin</p> <p>Content: TOC / arsenic / lead / barium / cadmium / chromium (total) / cobalt / molybdenum / nickel / mercury / selenium / thallium / tin / vanadium / zinc / chloride / cyanide / fluoride / sulphate / PAH / / PCDDs and PCDFs / highly volatile halogenated hydrocarbons / PCBs / hydrocarbons / benzene / ethylbenzene / toluene / xylenes / radioactivity</p>	2005-424-D, 2006-90-D, 2007-653-A

EN 13043	Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas	bound use in road construction	<p><b>recycled aggregates and manufactured aggregates</b></p> <p>Release: pH / electrical conductivity / ammonium-N / nitrite-N / chloride (Cl) / sulphate (SO<sub>4</sub>) / cyanide / fluoride (F) / AOX / DOC / PAH (EPA) / phenol / antimony (Sb) / arsenic (As) / barium (Ba) / lead (Pb) / cadmium (Cd) / chromium (Cr) / chromate / copper (Cu) / molybdenum (Mo) / nickel (Ni) / mercury (Hg) / selenium (Se) / vanadium (V) / zinc (Zn) / mineral oil hydrocarbons / PCB</p> <p>Content: EOX / TOC / arsenic / lead / cadmium / chromium / copper, zinc / PAH / PCB / hydrocarbons</p>	2004-71-D, 2005-735-FIN, 2006-223-E, 2007-385-A
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EN Number	Standard Title	Regulated field(s) of application	Requirements	Notified regulations.
EN 13055-2	Lightweight aggregates - Part 2: Lightweight aggregates for bituminous mixtures and surface treatments and for unbound and bound applications	unbound use of any/all aggregates in contact with soil/groundwater and surface water	<p><b>inorganic parameters (for all aggregates):</b></p> <p>Release: antimony (Sb) / arsenic (As) / barium (Ba) / cadmium (Cd) / chromium (Cr) / cobalt (Co) / copper (Cu) / mercury (Hg) / lead (Pb) / molybdenum (Mo) / nickel (Ni) / selenium (Se) / tin (Sn) / vanadium (V) / zinc (Zn) / bromide (Br) / chloride (Cl) / fluoride (F) / sulphate (SO4)</p> <p><b>further substances (for recycled and relevant manufactured aggregates):</b></p> <p>Release: pH / electrical conductivity / chromate / ammonium-N / nitrite-N / cyanide / AOX / DOC / PAH / hydrocarbons / phenol</p> <p>Content: EOX / TOC / arsenic / lead / cadmium / chromium / copper / zinc / benzene / ethylbenzene / toluene / xylenes (sum, being the sum of m-xylene, p-xylene and o-xylene) / phenol / naphthalene / phenanthrene / anthracene / fluoranthene / chrysene / benzo(a)anthracene / benzo(a)pyrene / benzo(k)fluoranthene / indeno(1,2,3cd)pyrene / benzo(ghi)perylene / PAHs (sum of the aforementioned PAH and EPA PAH) / PCBs (sum of regulated congeners) / mineral oil /asbestos (weighed, serpentine asbestos plus amphibole asbestos)</p>	2006-557-NL, 2004-71-D, 2005-735-FIN, 2007-385-A
		bound use in public road construction	<p><b>recycled aggregates and manufactured aggregates</b></p> <p>Release: pH / electrical conductivity / ammonium-N / nitrite-N / chloride (Cl) / sulphate (SO4) / cyanide / fluoride (F-) / AOX / DOC / PAH (EPA) / phenol index / antimony (Sb) / arsenic (As) / barium (Ba) / lead (Pb) / cadmium (Cd) / chromium (Cr) / chromate / copper (Cu) / molybdenum (Mo) / nickel (Ni) / mercury (Hg) / selenium (Se) / vanadium (V) / zinc (Zn) / mineral oil hydrocarbons / PCB</p> <p>Content: EOX / TOC / arsenic / lead / cadmium / chromium / copper, zinc / PAH / PCB / hydrocarbons</p>	2004-71-D, 2005-735-FIN, 2007-385-A

		bound use in other applications	<p><b>recycled aggregates and manufactured aggregates</b></p> <p>Release: pH / electric conductivity / AOX / turbidity / tendency to produce foam / arsenic (As) / antimony (Sb) / barium (Ba) / boron (B) / cadmium (Cd) / chromium (Cr) / chromate / cobalt (Co) / copper (Cu) / lead (Pb) / mercury (Hg) / molybdenum (Mo) nickel (Ni) / selenium (Se) / thallium (Tl) / tin (Sn) / vanadium (V) / zinc (Zn) / cyanide (CN-) / fluoride (F-) / chloride (Cl) / sulphate (SO4) / phenol / highly volatile halogenated hydrocarbons / 1,2-dichloroethane / tri- and tetrachloroethene / chloroethene (vinyl chloride) / alkylated benzenes / benzene / ethylbenzene / toluene / xylenes / MTBE / nonylphenol / chlorinated phenols / hexachlorobenzene / chlorobenzenes / epichlorohydrin / PAH / naphthalene and methylnaphthalenes / PCBs / hydrocarbons</p> <p>Content: EOX / TOC / arsenic / lead / barium / cadmium / chromium total / cobalt / molybdenum / nickel / mercury / selenium / thallium / tin / vanadium / zinc / chloride / cyanide / fluoride / sulphate / PAH / / PCDDs and PCDFs / highly volatile halogenated hydrocarbons / PCBs / hydrocarbons / benzene / ethylbenzene / toluene / xylenes / radioactivity</p>	2006-90-D
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EN Number	Standard Title	Regulated field(s) of application	Requirements	Notified regulations.
EN 13242	Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction	unbound use of any/all aggregates in contact with soil/groundwater and surface water	<p><b>inorganic parameters (for all aggregates):</b></p> <p>Release: antimony (Sb) / arsenic (As) / barium (Ba) / cadmium (Cd) / chromium (Cr) / cobalt (Co) / copper (Cu) / mercury (Hg) / lead (Pb) / molybdenum (Mo) / nickel (Ni) / selenium (Se) / tin (Sn) / vanadium (V) / zinc (Zn)/ bromide (Br) / chloride (Cl) / fluoride (F) / sulphate (SO4)</p> <p><b>further substances (for recycled and relevant manufactured aggregates)</b></p> <p>Release: pH / electrical conductivity / chromate / ammonium-N / nitrite-N / cyanide / AOX / DOC / PAH / hydrocarbons / phenol</p> <p>Content: EOX / TOC / arsenic / lead / cadmium / chromium / copper / zinc / benzene / ethylbenzene / toluene / xylenes (sum, being the sum of m-xylene, p-xylene and o-xylene) / phenol / naphthalene / phenanthrene / anthracene / fluoranthene / chrysene / benzo(a)anthracene / benzo(a)pyrene / benzo(k)fluoranthene / indeno(1,2,3cd)pyrene / benzo(ghi)perylene / PAHs (sum of the aforementioned PAH and EPA PAH) / PCBs (sum of regulated congeners) / mineral oil / asbestos (weighed, serpentine asbestos plus amphibole asbestos)</p>	2006-557-NL, 2004-71-D, 2005-735-FIN, 2006-223-E, 2007-653-A
		bound use in road construction	<p><b>recycled aggregates and manufactured aggregates</b></p> <p>Release: pH / electrical conductivity / ammonium-N / nitrite-N / chloride (Cl-) / sulphate (SO4-) / cyanide / fluoride (F-) / AOX / DOC / PAH (EPA) / phenol index / antimony (Sb) / arsenic (As) / barium (Ba) / lead (Pb) / cadmium (Cd) / chromium (Cr) / chromate / copper (Cu) / molybdenum (Mo) / nickel (Ni) / mercury (Hg) / selenium (Se) / vanadium (V) / zinc (Zn) / mineral oil hydrocarbons / PCB</p> <p>Content: EOX / TOC / arsenic / lead / cadmium / chromium / copper, zinc / PAH / PCB / hydrocarbons</p>	2004-71-D, 2005-735-FIN, 2006-223-E, 2007-653-A

EN 13450	Aggregates for railway ballast	unbound use of any/all aggregates in railway construction	<p><b>inorganic parameters (for all aggregates)</b></p> <p>Release: antimony (Sb) / arsenic (As) / barium (Ba) / cadmium (Cd) / chromium (Cr) / cobalt (Co) / copper (Cu) / mercury (Hg) / lead (Pb) / molybdenum (Mo) / nickel (Ni) / selenium (Se) / tin (Sn) / vanadium (V) / zinc (Zn) / bromide (Br) / chloride (Cl) / fluoride (F) / sulphate (SO4)</p> <p><b>further substances (for recycled and relevant manufactured aggregates):</b></p> <p>Release: pH / electrical conductivity</p> <p>Content: benzene / ethylbenzene / toluene / xylenes (sum, being the sum of m-xylene, p-xylene and o-xylene) / phenol / naphthalene / phenanthrene / anthracene / fluoranthene / chrysene / benzo(a)anthracene / benzo(a)pyrene / benzo(k)fluoranthene / indeno (1,2,3cd) pyrene / benzo(ghi)perylene / PAHs (sum of the afore mentioned PAHs) / PCBs (sum of PCB 28, 52, 101, 118, 138, 153 and 180) / mineral oil /asbestos (weighed, serpentine asbestos plus amphibole asbestos)</p> <p>Sensory evaluation: organoleptic test</p>	2006-557-NL, 2006-223-E, 2006-516-D
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EN Number	Standard Title	Regulated field(s) of application	Requirements	Notified regulations.
EN 13383-1	Armourstone - Part 1: Specification	Use in protective structures in water construction	<p><b>inorganic parameters (for all aggregates)</b></p> <p>Release: antimony (Sb) / arsenic (As) / barium (Ba) / cadmium (Cd) / chromium (Cr) / cobalt (Co) / copper (Cu) / mercury (Hg) / lead (Pb) / molybdenum (Mo) / nickel (Ni) / selenium (Se) / tin (Sn) / vanadium (V) / zinc (Zn)/ bromide (Br) / chloride (Cl) / fluoride (F) / sulphate (SO4)</p> <p><b>further substances (for recycled and relevant manufactured aggregates)</b></p> <p>Content: benzene / ethylbenzene / toluene / xylenes (sum, being the sum of m-xylene, p-xylene and o-xylene) / phenol / naphthalene / phenanthrene / anthracene / fluoranthene / chrysene / benzo(a)anthracene / benzo(a)pyrene / benzo(k)fluoranthene / indeno (1,2,3cd) pyrene / benzo(ghi)perylene / PAHs (sum of the afore mentioned PAHs) / PCBs (sum of PCB 28, 52, 101, 118, 138, 153 and 180) / mineral oil /asbestos (weighed, serpentine asbestos plus amphibole asbestos)</p> <p><b>For steel and metal slags additionally:</b> pH, electric conductivity</p>	1996-443-D, 2006-557-NL

NOTE: In regard to Essential Requirement 3 the requirements for information deriving from notified national regulations with respect to relevant substances identified on the EC "Indicative List" have to be fulfilled for relevant aggregates/aggregate categories when and where construction works in which they are used are subject to national regulations containing such requirements. Such harmonisation requires that provisions for the relevant regulated substances have to be included in the affected aggregate standards in an appropriate manner. Where the aggregate/aggregate type is to be used in construction works not subject to a relevant notified national regulation for a substance, performance need not be determined. If additional substances are regulated for the products within the scope of M/125, they may be added to this mandate. This applies both to notified regulations that may have been overlooked when preparing this amendment, or to any new notified regulations.