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**PREDSTANDARD**

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**12620:2002/oprA1:2006**

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**Agregati za beton**

Aggregates for concrete

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ICS 91.100.15; 91.100.30

Referenčna številka  
SIST EN 12620:2002/oprA1:2006(en)



ICS 91.100.15; 91.100.30

English Version

## Aggregates for concrete

Granulats pour béton

Gesteinskörnungen für Beton

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 154.

This draft amendment A1, if approved, will modify the European Standard EN 12620:2002. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## **Foreword**

This document (EN 12620:2002/prA1:2006) has been prepared by Technical Committee CEN/TC 154 "Aggregates", the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This amendment introduces clauses for recycled aggregates. The clauses call up new test methods, prEN 933-11, prEN 1744-5 and prEN 1744-6 and an amendment to EN 1367-4. These standards are at an advanced stage of preparation.

This Amendment to the European Standard EN 12620: 2002 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 89/106 EEC.

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

## 2 Normative references

Insert the following normative references:

prEN 933-11, *Tests for geometrical properties of aggregates – Part 11: Classification test for the constituents of coarse recycled aggregates*

prEN 1744-5, *Tests for chemical properties of aggregates – Part 5: Determination of acid soluble chloride salts*

prEN 1744-6, *Tests for chemical properties of aggregates – Part 6: Determination of the influence of recycled aggregate extract on the initial setting time of cement*

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## 5 Physical requirements

### 5.7.2 Volume stability – drying shrinkage

Delete 'NOTE' and substitute 'NOTE 1'.

Add new note as follows:

"NOTE 2 For recycled aggregates, when required, the drying shrinkage associated with the aggregates should be determined in accordance with Annex A of EN 1367-4."

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Add new sub-clause 5.8 as follows (and renumber all subsequent Tables in the standard):

**5.8 Classification of the constituents of coarse recycled aggregates and recycled concrete aggregates**

The proportions of constituent materials in coarse recycled aggregate shall be determined in accordance with prEN 933-11 and shall comply with the requirements of Table 18.

**Table 18 – Categories for constituents of coarse recycled aggregates**

Constituent	Content Percentage by mass	Category
R <sub>C</sub>	≥90	R <sub>C</sub> 90
	≥70	R <sub>C</sub> 70
	<70	R <sub>C</sub> Declared
	No requirement	R <sub>C</sub> NR
R <sub>C</sub> +R <sub>U</sub>	≥90	R <sub>CU</sub> 90
	≥70	R <sub>CU</sub> 70
	≥50	R <sub>CU</sub> 50
	<50	R <sub>CU</sub> Declared
	No requirement	R <sub>CU</sub> NR
R <sub>B</sub>	≤10	R <sub>B</sub> 10
	≤30	R <sub>B</sub> 30
	≤50	R <sub>B</sub> 50
	>50	R <sub>B</sub> Declared
	No requirement	R <sub>B</sub> NR
R <sub>A</sub>	≤1	R <sub>A</sub> 1-
	≤5	R <sub>A</sub> 5-
	≤10	R <sub>A</sub> 10-
FL <sub>S</sub> +FL <sub>NS</sub>	≤1	FL <sub>total</sub> 1
	≤3	FL <sub>total</sub> 3

$FL_{NS}$	$\leq 0,01$ $\leq 0,05$ $\leq 0,1$	$FL_{NS0,01}$ $FL_{NS0,05}$ $FL_{NS0,1}$
$X+R_G$	$\leq 0,2$ $\leq 0,5$ $\leq 1$	$X R_{G0,2}$ $X R_{G0,5}$ $X R_{G1}$

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## 6 Chemical requirements

### 6.2 Chlorides

Add the following at the end of the sub-clause (i.e. after the NOTE):

"The acid-soluble chloride ion content of recycled aggregates for concrete shall be determined in accordance with prEN 1744-5, and shall, on request, be declared by the producer."

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Add new sub-clause 6.3.3 as follows:

#### 6.3.3 Water soluble sulfate content of recycled aggregates

When required, the water soluble sulfate content of recycled aggregates determined in accordance with EN 1744-1, shall be declared in accordance with the relevant category specified in Table 22.

**Table 22 – Categories for maximum values of water-soluble sulfate content of recycled aggregates**

<b>Water-soluble sulfate content</b> Percentage by mass	<b>Category</b> SS
≤ 0,2	SS <sub>0,2</sub>
No requirement	SS <sub>NR</sub>

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### 6.4 Other constituents

#### 6.4.1 Constituents which alter the rate of setting and hardening of concrete

Delete the last paragraph ("When required . . . . results declared.") and substitute the following new text and table:

"When required, the presence of lightweight organic contaminants shall be tested in accordance with EN 1744-1.



When required, recycled aggregates shall be assessed for the influence of water-soluble materials from the aggregates on the initial setting time of cement paste in accordance with prEN 1744-6. The aggregate shall comply with the requirements of Table 23."

**Table 23 – Categories for influence of water-soluble materials from recycled aggregates on the initial setting time of cement paste**

Change in initial setting time (%)	Category (A)
≤ 7	A7
≤ 25	A25
> 25	A <sub>Declared</sub>
No requirement	ANR

Two screening tests for the presence of organic matter are in common use, the sodium hydroxide test and the fulvo acid test (see EN 1744-1, 15.1 and 15.2). Both tests may be applied to recycled aggregates. If the supernatant liquid in these tests is lighter than the standard colours the aggregates may be considered to be free from organic matter.

NOTE 3 Sugars do not affect the colour of the supernatant liquid in the sodium hydroxide or the fulvo acid test. If it is suspected that sugars or sugar type materials are present, the aggregate should be tested using the water extract test (see EN 1744-6). The requirements for the influence on setting time shown above should apply."

## 8 Designation

### 8.1 Designation and description

Delete "c) aggregates size" and substitute the following:

- "c) for recycled aggregate, the class according to Table 18;
- d) aggregate size

NOTE For recycled aggregate, the processing depot will suffice for the source in (a). Type should be given as recycled aggregate in (b)."