

Testing hardened concrete —

Part 1: Shape, dimensions and other requirements for specimens and moulds

The European Standard EN 12390-1:2000 has the status of a
British Standard

ICS 91.100.30

National foreword

This British Standard is the official English language version of EN 12390 1:2000, including Corrigendum September 2004. Together with BS EN 12390-2:2000, it will supersede BS 1881-108:1983, BS 1881-109:1983 and BS 1881-110:1983, which will be withdrawn in December 2003 when the full package of concrete standards is available.

The UK participation in its preparation was entrusted by Technical Committee B/517, Concrete, to Subcommittee B/517/1, Concrete production and testing, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 10, an inside back cover and a back cover.

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14344 Corrigendum No. 1	27 March 2003	Addition of supersession details to national foreword
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English version

Testing hardened concrete - Part 1: Shape, dimensions and other requirements for specimens and moulds

Essai pour béton durci - Partie 1: Forme, dimensions et autres exigences aux éprouvettes et aux moules

Prüfung von Festbeton - Teil 1: Form, Maße und andere Anforderungen für Probekörper und Formen

This European Standard was approved by CEN on 3 February 2000.

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This European Standard exists 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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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 104, Concrete (performance, production, placing and compliance criteria), the Secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2001, and conflicting national standards shall be withdrawn at the latest by December 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This standard is one of a series for test methods for testing hardened concrete.

It is based on the draft International Standard ISO 1920 - Concrete tests - Dimensions, tolerances and applicability of test specimens. However "applicability" has been omitted as not being appropriate and the special rules for calculating test results have also been omitted, both these items being covered in the relevant standards.

This standard recognises alternative approaches towards obtaining test specimens of the correct sizes and shapes. The first is to use moulds whose life is limited and to measure the specimens to ensure conformity. The second is to cast specimens in calibrated metal moulds which meet tighter tolerances than for specimens. The use of calibrated moulds allows relaxation on the requirement for measuring the specimens.

Informative Annex A gives the application of ISO 1101 to measuring the shapes of concrete test specimens and moulds.

Informative Annex B gives guidance on the measurement of flatness of specimens and moulds.

A draft for this standard was published in 1996 for CEN enquiry as prEN 12356. It was one of a series of individually numbered test methods for fresh or hardened concrete. For convenience it has now been decided to combine these separate draft standards into three new standards with separate parts for each method, as follows:

- Testing fresh concrete (EN 12350)
- Testing hardened concrete (EN 12390)
- Testing concrete in structures (EN 12504)

The series EN 12390 includes the following parts where the brackets give the numbers under which particular test methods were published for CEN enquiry:

EN 12390 Testing hardened concrete -

- Part 1: Shape, dimensions and other requirements of specimens and moulds (former prEN 12356:1996)
- Part 2: Making and curing specimens for strength tests (former prEN 12379:1996)
- Part 3: Compressive strength of test specimens (former prEN 12394:1996)
- Part 4: Compressive strength - Specification for testing machines (former prEN 12390:1996)
- Part 5: Flexural strength of test specimens (former prEN 12359:1996)
- Part 6: Tensile splitting strength of test specimens (former prEN 12362:1996)
- Part 7: Density of hardened concrete (former prEN 12363:1996)
- Part 8: Depth of penetration of water under pressure (former prEN 12364:1996)

1 Scope

This standard specifies the shape, dimensions and tolerances of cast concrete test specimens in the form of cubes, cylinders and prisms, and of the moulds required to produce them.

NOTE The tolerances specified in this standard are based on the needs of strength testing, but they can be applicable to tests for other properties.