



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 14721+A1:2007**

ICS 91.100.30

**TEST METHOD FOR METALLIC FIBRE  
CONCRETE - MEASURING THE FIBRE  
CONTENT IN FRESH AND HARDENED  
CONCRETE**

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EUROPEAN STANDARD  
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**EN 14721:2005+A1**

September 2007

ICS 91.100.30

Supersedes EN 14721:2005

English Version

**Test method for metallic fibre concrete - Measuring the fibre  
content in fresh and hardened concrete**

Méthode d'essai du béton de fibres métalliques - Mesurage  
de la teneur en fibres du béton frais ou durci

Prüfverfahren für Beton mit metallischen Fasern -  
Bestimmung des Fasergehalts in Frisch- und Festbeton

This European Standard was approved by CEN on 27 June 2005 and includes Amendment 1 approved by CEN on 16 August 2007.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

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 CEN Management Centre has the same status as the official versions.

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<b>Contents</b>		<b>Page</b>
<b>Foreword.....</b>		<b>3</b>
<b>1</b>	<b>Scope .....</b>	<b>4</b>
<b>2</b>	<b>Normative references .....</b>	<b>4</b>
<b>3</b>	<b>Principle .....</b>	<b>4</b>
<b>4</b>	<b>Apparatus .....</b>	<b>4</b>
<b>5</b>	<b>Test specimens .....</b>	<b>5</b>
<b>6</b>	<b>Testing procedures.....</b>	<b>5</b>
<b>7</b>	<b>Expression of results .....</b>	<b>7</b>
<b>8</b>	<b>Test report .....</b>	<b>7</b>
<b>9</b>	<b>Precision .....</b>	<b>7</b>

## **Foreword**

This European Standard (EN 14721:2005+A1:2007) has been prepared by Technical Committee CEN/TC 229 “Precast concrete products”, the secretariat of which is held by AFNOR.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2008 and conflicting national standards shall be withdrawn at the latest by March 2008.

This document includes Amendment 1, approved by CEN on 2007-08-16.

This document supersedes EN 14721:2005.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** and **A1**.

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

# EN 14721:2005+A1:2007 (E)

## 1 Scope

This European Standard specifies two methods of measuring the fibre content of metallic fibre concrete. Method A measures the fibre content of a hardened concrete specimen. Method B measures the fibre content of a fresh concrete specimen.

Ⓐ This European Standard does not apply to sprayed concrete. Ⓐ

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12350-6, *Testing fresh concrete – Part 6: Density*

EN 12390-7, *Testing hardened concrete – Part 7: Density of hardened concrete*

## 3 Principle

Fibres are extracted from a hardened (Method A) or fresh (Method B) concrete sample and the fibre content is determined from the mass of fibre and the volume of the concrete sample.

## 4 Apparatus

### 4.1 Method A

4.1.1 Core drill equipment, capable of extracting test cores from the hardened concrete to the volume set out in 5.1.

4.1.2 Callipers and/or rules, capable of measuring the dimensions of test cores to an accuracy of 0,5 mm.

4.1.3 Balance, equipped with a stirrup for weighing the test core in both air and water to an accuracy of 10 g.

4.1.4 Water tank, fitted with a device to maintain water at a constant level and of sufficient size to allow the test core on the stirrup to be fully immersed to a constant depth.

4.1.5 Balance or scales, capable of determining the mass of the extracted metallic fibres to an accuracy of 0,5 g.

### 4.2 Method B

4.2.1 Container, watertight, of sufficient rigidity to retain its shape, made of metal not readily attacked by cement paste, having a smooth internal face, with the rim machined to a plane surface. The rim and base shall be parallel. The smallest dimension of the container shall be at least four times the maximum nominal size of the coarse aggregate in the concrete, but shall be not less than 150 mm. The volume of the container shall be not less than 3 ℓ.

4.2.2 Scoop, or similar sampling device, made from non-absorbent material not readily attacked by cement paste, suitable for taking increments of concrete.

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