

Testing sprayed concrete - Part 7: Fibre content of fibre reinforced concrete

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14488-7:2006 sisaldab Euroopa standardi EN 14488-7:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 29.05.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 14488-7:2006 consists of the English text of the European standard EN 14488-7:2006. This document is endorsed on 29.05.2006 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This part of European Standard specifies a method for the determination of the fibre content of sprayed concrete from either a fresh or hardened (i.e. before or after set) concrete sample. Only the method using a fresh sample is appropriate with polymer fibres, while both types are applicable with steel fibres.	Scope: This part of European Standard specifies a method for the determination of the fibre content of sprayed concrete from either a fresh or hardened (i.e. before or after set) concrete sample. Only the method using a fresh sample is appropriate with polymer fibres, while both types are applicable with steel fibres.
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ICS 91.100.30

Võtmesõnad: concretes, construction, construction materials, determination of content, fibre concretes, fibre reinforced, material, methods, mortars, reinforced, reinforced concrete, sprayed concrete, steel-fibre, synthetic fibres, testing

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English Version

Testing sprayed concrete - Part 7: Fibre content of fibre reinforced concrete

Essais pour béton projeté - Partie 7 : Teneur en fibres du béton renforcé par des fibres

Prüfung von Spritzbeton - Teil 7: Fasergehalt von faserverstärktem Beton

This European Standard was approved by CEN on 27 February 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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.



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Foreword

This European Standard (EN 14488-7:2006) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", 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 October 2006, and conflicting national standards shall be withdrawn at the latest by December 2007.

This European Standard is part of a series concerned with testing sprayed concrete.

This series EN 14488 'Testing sprayed concrete' includes the following parts:

- Part 1: Sampling fresh and hardened concrete
- Part 2: Compressive strength of young sprayed concrete
- Part 3: Flexural strengths (first peak, ultimate and residual) of fibre reinforced beam specimens
- Part 4: Bond strength of cores by direct tension
- Part 5: Determination of energy absorption capacity of fibre reinforced slab specimens
- Part 6: Thickness of concrete on a substrate
- Part 7: Fibre content of fibre reinforced concrete

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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.

1 Scope

This part of European Standard specifies a method for the determination of the fibre content of sprayed concrete from either a fresh or hardened (i.e. before or after set) concrete sample. Only the method using a fresh sample is appropriate with polymer fibres, while both types are applicable with steel fibres.

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*

EN 12504-1, *Testing concrete in structures - Part 1: Cored specimens - Testing, examining and testing in compression*

EN 14488-1, *Testing sprayed concrete - Part 1: Sampling fresh and 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 their mass and the volume of the concrete sample.

4 Apparatus

4.1 Balance or scale capable of determining the mass of the concrete sample and extracted fibres to the required accuracy.

4.2 Container to support and suspend a sample in water in order to determine its mass.

4.3 Water tank suitable for the immersion of samples in water at $(20 \pm 2) ^\circ\text{C}$.

4.4 Trowel, or similar cutting device, made from a non-absorbent material not readily attacked by cement paste, suitable for cutting a concrete sample from fresh, in situ sprayed concrete.

5 Test specimens

5.1 General

Fresh samples may be extracted from the basic mix, the in situ material or from a test panel. Hardened samples may be cut from the in situ material or from a test panel. It should be noted that the fibre content at each of these locations may be different, due to the spraying process. The most appropriate sample type and location should be used, which will depend on the purpose of the quality control and on the compliance requirements of the specification.

For hardened samples the test may be conducted in as received, saturated or oven-dried moisture states.