

**Products and systems for the  
protection and repair of concrete  
structures - Test methods -  
Determination of compressive strength  
of repair mortar**

Products and systems for the protection and repair  
of concrete structures - Test methods -  
Determination of compressive strength of repair  
mortar

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12190:2001 sisaldab Euroopa standardi EN 12190:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12190:2001 consists of the English text of the European standard EN 12190:1998.</p> <p>This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This European Standard specifies a method for determining the compressive strength of mortars and concretes for structural and non-structural repair, as defined in EN 1504-1. The method applies to all types of repair mortar and concrete with a maximum aggregate size of 8 mm. It distinguishes between mortar with hydraulic and polymer binders. Hereafter, the term mortar refers to both mortars and concretes.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies a method for determining the compressive strength of mortars and concretes for structural and non-structural repair, as defined in EN 1504-1. The method applies to all types of repair mortar and concrete with a maximum aggregate size of 8 mm. It distinguishes between mortar with hydraulic and polymer binders. Hereafter, the term mortar refers to both mortars and concretes.</p>
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**Võtmesõnad:** compression tests, compressive strength, concrete structures, determination, materials, protection, repairs, tests

ICS 91.100.30

Descriptors: Concrete structures, mortar, repair, testing.

**English version**

**Products and systems for the protection and repair  
of concrete structures – Test methods**

Determination of compressive strength of repair mortar

Produits et systèmes pour la protection et la réparation des structures en béton – Méthodes d'essais – Détermination de la résistance à la compression pour les mortiers de réparation

Produkte und Systeme für den Schutz und die Instandsetzung von Betontragwerken – Prüfverfahren – Bestimmung der Druckfestigkeit von Reparaturmörteln

This European Standard was approved by CEN on 1998-10-02.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

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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 1999, and conflicting national standards shall be withdrawn at the latest by April 1999.

This European Standard is one of a series dealing with products and systems for the protection and repair of concrete structures. It describes a method for determining the compressive strength of repair mortar or concrete samples, which can be made using PC (polymer mortars and polymer concretes), PCC (polymer hydraulic cement mortars or concretes) or HC (hydraulic mortars and hydraulic concretes) as defined in EN 1504-1. The method applies to materials with a maximum aggregate size of 8 mm.

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.

## 1 Scope

This European Standard specifies a method for determining the compressive strength of mortars and concretes for structural and non-structural repair, as defined in EN 1504-1.

The method applies to all types of repair mortar and concrete with a maximum aggregate size of 8 mm. It distinguishes between mortar with hydraulic and polymer binders. Hereafter, the term mortar refers to both mortars and concretes.

NOTE : For repair mortars and concretes with aggregate in excess of 8 mm in size, conventional concrete test methods according to prEN 206 are used.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. Normative references are cited at the appropriate places in the text and the relevant publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references this European Standard refers to the latest edition of the publication.

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| EN 1504  | Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity. |
| EN 196-1 | Methods of testing cement - Part 1 : Determination of strength.  |
| prEN 206 | Concrete - Performance, production and conformity.   |

## 3 Definitions

For the purposes of this standard, the definitions contained in EN 1504-1 apply.

## 4 Principle

For PC, PCC and HC mortar the principle of the test method is to determine the cube compressive strength of 40 mm specimens.

An alternative method is to use the equivalent cube method based on prismatic test specimens of 40 mm x 40 mm x 160 mm in size. For prisms of PC mortar, the compressive strength shall only be determined after preparing the sample by cutting into 40 mm cube specimens.

## 5 Equipment

The following equipment is required.

**5.1 Concrete mixer**, forced action pan type mixer.

**5.2 Mortar mixer**, in accordance with EN 196-1.