

Müüritsement. Osa 1: Koostis, spetsifikatsioonid ja vastavuskriteeriumid

Masonry cement - Part 1: Composition, specifications and conformity criteria

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 413-1:2006 sisaldab Euroopa standardi EN 413-1:2004 ingliskeelset teksti.

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English version

Masonry cement - Part 1: Composition, specifications and conformity criteria

Ciment de maçonnerie - Composition, spécifications et critères de conformité

Putz- und Mauerbinder - Teil 1: Zusammensetzung, Anforderungen und Konformitätskriterien

This European Standard was approved by CEN on 10 December 2003.

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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.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN 413-1:2004) has been prepared by Technical Committee CEN/TC 51 "Cement and building limes", the secretariat of which is held by IBN.

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of an identical text or by endorsement, at the latest by August 2004, and conflicting national standards shall be withdrawn at the latest by November 2005.

This document supersedes ENV 413-1:1994.

The European Standard, EN 413, "Masonry cement", consists of the following Parts:

Part 1: Composition, specifications and conformity criteria;

Part 2: Test methods.

This document 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(s).

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

EN 413-1 has been prepared to provide a range of materials from which users of EN 998-1, EN 998-2 and ENV 1996-1-1 (Eurocode 6) can select with confidence to achieve the level of strength and durability required of masonry and rendering.

The main changes from ENV 413-1:1994 are as follows:

- organic additives that may be included shall not be more than 0,5 % (see Table 1);
- the final setting time is an optional requirement if the initial setting time is less than 6 h (see 5.3.3);
- the upper limit for water retention is removed (see Table 2);

The requirements of this European Standard are, where appropriate, based on the results from tests on masonry cement in accordance with EN 196 'Methods of testing cement'. Strength is measured on a standard mortar prepared in accordance with EN 196-1 with a fixed water/cement ratio and compacted using the equipment described in EN 196-1 or EN 459-2. However, some additional tests have been found necessary and these tests are described in EN 413-2.

CEN/TC 51 recognises the importance of workability (cohesivity at standard consistence) of mortars prepared from masonry cements. A test method is available in CR 13933, and in which results of a test programme are also given. This test method was not found valid for standard requirement purposes due to its lack of reproducibility, however it provides valuable information for the manufacturers and users on the property in use of masonry cements.

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The properties of bond and durability (resistance to frost and/or chemical attack) of mortars are very important and appropriate mortar tests are being developed by CEN/TC 125, Masonry. In many applications, particularly in severe environmental conditions, the choice of the type/class of masonry cement from EN 413-1 can influence the durability of mortar, e.g. in respect of frost and chemical resistance.

Annex A is informative.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

The basis for this European Standard has been the national standards already existing in Europe. These national standards differ from each other; some of the differences relate to important principles of definition and specification of properties and composition.

CEN/TC 51 has not found it appropriate to prepare a European masonry cement standard which is a common denominator of all existing national standards. Masonry cement should be defined and specified precisely with sufficiently stringent requirements to satisfy those who are responsible for the design and construction of buildings and other structures for maximum safety and durability.

CEN/TC 51 has, on the other hand, been aware that a precise and detailed formulation of a European Standard may render it more difficult to adopt the standard in the countries where the national standards differ from it.

CEN/TC 51 has made every effort to obtain a balance between an adequate and clear wording of this standard and the anticipated national difficulties of adoption.

EN 413-1 is a carefully balanced compromise which has been thoroughly discussed, taking into account the need to arrive at a usable standard.

1 Scope

This European Standard specifies the definition and composition of masonry cements as commonly used in Europe for the production of mortar for bricklaying and blocklaying and for rendering and plastering. It includes physical, mechanical and chemical requirements and defines strength classes. EN 413-1 also states the conformity criteria and the related rules. Necessary durability requirements are also given.

NOTE For normal applications the information given in EN 413-1, in EN 998-1 and in EN 998-2 is generally sufficient. However, in special cases, an exchange of additional information between the masonry cement producer and user can be helpful. The details of such an exchange are not within the scope of EN 413-1 but should be dealt with in accordance with national standards or other regulations or can be agreed between the parties concerned.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the 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 the latest edition of the publication referred to applies (including amendments).

EN 196-1, *Methods of testing cement — Part 1: Determination of strength.*

EN 196-2, *Methods of testing cement — Part 2: Chemical analysis of cement.*

EN 196-3, *Methods of testing cement — Part 3: Determination of setting time and soundness.*

EN 196-6, *Methods of testing cement — Part 6: Determination of fineness.*

EN 196-7, *Methods of testing cement — Part 7: Methods of taking and preparing samples of cement.*

EN 196-21¹⁾, *Methods of testing cement — Part 21: Determination of the chloride, carbon dioxide and alkali content of cement.*

EN 197-1, *Cement — Part 1: Composition, specification and conformity criteria for common cements.*

EN 197-2:2000, *Cement — Part 2: Conformity evaluation.*

EN 413-2, *Masonry cement — Part 2: Test methods.*

EN 459-1, *Building lime - Part 1: Definitions, specifications and conformity criteria.*

EN 459-2: 2001, *Building lime — Part 2: Test methods.*

EN 12878, *Pigments for the colouring of building materials based on cement and/or lime - Specifications and methods of test.*

¹⁾ EN 196-21 is currently being incorporated in EN 196-2.