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TSEMENT. OSA 5: PORTLAND-KOMPOSIITTSEMENT CEM II/C-M JA KOMPOSIITTSEMENT CEM VI

Cement - Part 5: Portland-composite cement CEM II/C-M and Composite cement CEM VI

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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See Eesti standard EVS-EN 197-5:2021 sisaldab Euroopa standardi EN 197-5:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 197-5:2021 consists of the English text of the European standard EN 197-5:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.05.2021.	Date of Availability of the European standard is 19.05.2021.
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ICS 91.100.10

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 197-5

May 2021

ICS 91.100.10

English Version

Cement - Part 5: Portland-composite cement CEM II/C-M and Composite cement CEM VI

Ciment - Partie 5 : Ciment Portland composé CEM II/C-M et Ciment composé CEM VI

Zement - Teil 5: Portlandkompositzement CEM II/C-M und Kompositzement CEM VI

This European Standard was approved by CEN on 8 February 2021.

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European foreword

This document (EN 197-5:2021) has been prepared by Technical Committee CEN/TC 51 “Cement and building lime”, the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by November 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

The purpose of this document is to specify the requirements for the two more recently developed cement types, Portland-composite cement CEM II/C-M and Composite cement CEM VI, which are not covered by the European Standard EN 197-1:2011. The fitness of these cement types for the intended use to produce structural concrete (reinforced or not) has been experimentally assessed by testing programs developed in the frame of CEN/TC 51/WG 6, the results of which have been included in three dossiers [5, 6, 7] approved by CEN/TC 51.

The cement types and strength classes defined in this document allow the specifier and/or the user to fulfil objectives of sustainability for cement-based constructions and to minimize the use of natural resources in accordance with local conditions of production.

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

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Introduction

It is recognized that different cements have different properties and performance. The performance tests available at the time of publication of this document (i.e. for the determination of setting time, strength, soundness and heat of hydration) have been included in this standard. In addition, work is being carried out by CEN/TC 51 to identify any additional tests which are needed to specify further performance characteristics of cement. Until further performance tests are available it is necessary that the choice of cement, especially the type and/or strength class in relation to the requirements for durability depending on exposure class and type of construction in which it is incorporated, follows the appropriate standards and/or regulations for concrete, mortar, grout etc. valid in the place of use.

The European Committee for Standardization (CEN) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning Portland limestone calcined clay cement given in Clause 4 as a possible CEM II/C-M cement and which is claimed to be relevant for the following clauses of this document: Clause 1 and Clause 4.

CEN takes no position concerning the evidence, validity and scope of this patent right.

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. CEN shall not be held responsible for identifying any or all such patent rights.

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1 Scope

This document deals with Portland-composite cement CEM II/C-M, not covered by EN 197-1, and a different type of Composite cement CEM VI, also not covered by EN 197-1, whose intended use is the preparation of concrete, mortar, grout etc.

This document does not cover:

— common cement covered by EN 197-1;

— very low heat special cement covered by EN 14216;

— supersulfated cement covered by EN 15743;

— calcium aluminate cement covered by EN 14647;

— masonry cement covered by EN 413-1.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 197-1:2011, *Cement — Part 1: Composition, specifications and conformity criteria for common cements*

EN 197-2:2020, *Cement — Part 2: Assessment and verification of constancy of performance*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 197-1:2011 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

4 Constituents and composition

Constituents of cement covered by this document shall fulfil the requirements specified in Clause 5 of EN 197-1:2011.

However, the following requirement for limestone (L, LL) replacing 5.2.6 a) of EN 197-1:2011 shall apply:

The calcium carbonate ($CaCO_3$) content calculated from the calcium oxide content shall be at least 40 % by mass and the sum of calcium carbonate and magnesium carbonate ($CaCO_3$ and $MgCO_3$) content calculated from the calcium oxide and magnesium oxide content respectively shall be at least 75 % by mass.

The composition of Portland-composite cement CEM II/C-M and Composite cement CEM VI covered by this document is specified in Table 1.

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