



SLOVENSKI STANDARD
SIST EN 197-2:2001

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Nadomešča:
SIST ENV 197-2:2000

Cement - 2. del: Ovrednotenje skladnosti

Cement - Part 2: Conformity evaluation

Zement - Teil 2: Konformitätsbewertung

Ciment - Partie 2: Evaluation de la conformité

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ICS:

91.100.10 Cement. Mavec. Apno. Malta Cement. Gypsum. Lime.
Mortar

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 197-2

June 2000

ICS 91.100.10

Supersedes ENV 197-2:1995

English version

Cement - Part 2: Conformity evaluation

Ciment - Partie 2: Evaluation de la conformité

Zement - Teil 2: Konformitätsbewertung

This European Standard was approved by CEN on 26 May 2000.

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

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 51 "Cement and building limes", the secretariat of which is held by IBN.

This European Standard replaces ENV 197-2:1995

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of an identical text or by endorsement, at the latest by December 2000, and conflicting national standards shall be withdrawn at the latest by December 2000.

Annex A of EN 197-2 is normative, annex B 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

EN 197-2 specifies the scheme for the evaluation of conformity of cements to their corresponding product specification standards, including certification of conformity by a certification body.

The standard provides technical rules for factory production control by the manufacturer, including autocontrol testing of samples, and for the tasks of the certification body. It also provides rules for actions to be followed in the event of non-conformity, the procedure for the certification of conformity and requirements for dispatching centres.

In EN 197-2 the word "cement" is used to refer both to common cements as defined in EN 197-1 and to other cements and binders for which the relevant product specification standard makes reference to EN 197-2 and which are submitted for certification. Such a cement is produced at a given factory and belongs to a particular type and a particular strength class, as defined and specified in the relevant product specification standard.

2 Normative references

EN 197-2 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 EN 197-2 only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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

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

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

ENV 413-1, *Masonry cement - Part 1: Specification.*

EN ISO 17025, *General requirements for the competence of testing and calibration laboratories.*

EN 45004, *General criteria for the operation of bodies performing inspection.*

EN 45011, *General criteria for certification bodies operating product certification (ISO/IEC Guide 65:1996).*

ISO 2854, *Statistical interpretation of data - Techniques of estimation and tests relating to means and variances.*

3 Definitions

For the purposes of EN 197-2, the following definitions apply:

3.1 Specific definitions

3.1.1

certificate of conformity

document issued under the rules of this scheme for the evaluation of conformity indicating that adequate confidence is provided that cement is in conformity with the relevant product specification standard

3.1.2

conformity mark

protected mark applied on the basis of the certificate of conformity (see 3.1.1)

3.1.3

certified cement

cement for which a certificate of conformity (see 3.1.1) has been issued

3.1.4

initial period

immediate period after the first issuing of the certificate of conformity for a cement

3.1.5

certification body

impartial body, governmental or non-governmental, possessing the necessary competence and responsibility to carry out conformity certification according to given rules of procedure and management

3.1.6

factory production control

permanent internal control of cement production exercised by the manufacturer consisting of internal quality control complemented by autocontrol testing

3.1.7

factory

facility used by a manufacturer for the production of cement using equipment which is suitable for continuous mass production of cement including, in particular, equipment

for adequate grinding and homogenization and the necessary silo capacity for the storage and dispatch of each cement produced. This equipment and the production control applied allow the control of production with sufficient accuracy to ensure that the requirements of the relevant product specification standard are met

3.1.8

new factory

factory which is not already producing cement(s) certified under this scheme

3.1.9

existing factory

factory which is already producing cement(s) certified under this scheme

3.1.10

depot

bulk cement handling facility (not located at the factory) used for the dispatch of cement (whether in bulk or bagged) after transfer or storage where the manufacturer has full responsibility for all aspects of the quality of the cement

3.1.11

dispatching centre

bulk cement handling facility (not located at the factory) used for the dispatch of cement after transfer or storage where an intermediary has full responsibility for all aspects of the quality of the cement

3.1.12

intermediary

natural or legal person who takes from the manufacturer bulk cement certified according to EN 197-2 and bearing the conformity mark, who undertakes full responsibility for maintaining in a bulk handling facility all aspects of the quality of the cement and who supplies the cement onwards to a further person

3.1.13

confirmation autocontrol testing

continual testing carried out by an intermediary which consists of testing of samples taken by the intermediary at the point(s) of release from the dispatching centre

3.1.14

works' quality manual

document that provides information on the factory production control which is applied by a manufacturer at a particular factory to ensure conformity of the cement with the requirements of the relevant product specification standard

3.2 General definitions

See annex B (informative).

4 Factory production control by the manufacturer

4.1 General requirements

4.1.1 Concept

Factory production control means the permanent internal control of cement production exercised by the manufacturer and consists of internal quality control (see 4.2) complemented by autocontrol testing of samples of cement taken at the point of release ¹⁾ (see 4.3).

NOTE The requirements of EN 197-2 as regards factory production control take account of those clauses of EN ISO 9002 which are relevant to the production, process control and testing of cement.

4.1.2 Works' quality manual

The manufacturer's documentation and procedures for factory production control shall be described in a Works' quality manual, which shall adequately describe, among other things:

- a) the quality aims and the organisational structure, responsibilities and powers of the management with regard to product quality and the means to monitor the achievement of the required product quality and the effective operation of the internal quality control (see 4.1.3);
- b) the manufacturing and quality control techniques, processes and systematic actions that will be used (see 4.2.1, 4.2.3 and 4.3.2);
- c) the inspections and tests that will be carried out before, during and after manufacture, and the frequency with which they will be carried out (see 4.2.2, 4.3.1 and 4.3.3).

The Works' quality manual prepared by the manufacturer for each factory shall include an adequate system of documentation (see 4.1.4 and 4.3.4).

The Works' quality manual shall address and document the procedures operated to ensure that the manufactured cement conforms to the technical specifications. The manual may reference associated documents which provide further details of the autocontrol testing of samples and the internal quality control. For the purpose of this scheme, the term Works' quality manual shall be considered to include these associated documents.

NOTE In the case of an existing quality management system according to EN ISO 9002, the certification body may examine if the corresponding quality manual meets all the requirements of EN 197-2 which are relevant to the factory production control of cement. Provided all the requirements are included, this quality manual may also be applied for product certification.

¹⁾ This testing corresponds also to the "further testing of samples" mentioned in Annex III Section 2 point (i) of the Construction Products Directive 89/106/EEC.

4.1.3 Management systems

4.1.3.1 Quality policy statement

The Works' quality manual shall include a statement by management defining its quality policy, objectives and commitments to the attainment of product quality.

4.1.3.2 Management representative

The manufacturer shall appoint a management representative who, irrespective of other responsibilities, shall have defined authority and responsibility for ensuring that the requirements of EN 197-2 for the evaluation of conformity are implemented and maintained.

4.1.3.3 Internal audits and management review

In order to ensure the continuing suitability and effectiveness of the Work's quality manual to meet the requirements of EN 197-2, the manufacturer shall perform at least once per year:

- a) internal audits covering the scope of this clause 4 and 6.1;
- b) a management review of the factory production control, taking into account records of the internal audits.

4.1.3.4 Training

The Works' quality manual shall describe the measures taken to ensure that all the personnel involved in operations that can affect internal quality control and product quality have appropriate experience or training. Appropriate records shall be retained.

4.1.4 System of documentation

4.1.4.1 Document control

The management representative shall be responsible for the control of all documents and data related to factory production control and to this scheme for the evaluation of conformity.

This control shall ensure that the appropriate issues of all documents are available at essential locations, that obsolete documents are withdrawn and that changes or modifications to any document are effectively introduced.

A master list shall be established to identify the current version of documents in order to prevent the use of non-applicable documents.

4.1.4.2 Quality records

The manufacturer shall retain records of factory production control for at least the period required to comply with relevant legislation.

4.2 Internal quality control

4.2.1 Process control

4.2.1.1 General

The Works' quality manual shall describe the parameters for process planning, process control and testing, inspection, corrective action, verification, dispatch and the associated records.

4.2.1.2 Constituents and composition of cement

The manufacturer shall establish documented procedures and appropriate test methods to ensure that the constituents meet the requirements of the relevant product specification standard and are suitable to enable cement to be produced meeting the technical specification.

The Works' quality manual shall describe the methods used by the manufacturer to ensure that the composition of the cement produced conforms to the relevant product specification standard, including appropriate test methods.

4.2.1.3 Control of off-specification production

The Works' quality manual shall contain procedures to ensure that off-specification production is adequately managed.

4.2.2 Measuring and testing

4.2.2.1 Inspection, measuring and test equipment

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The equipment for in-process inspection and testing shall be regularly checked and calibrated in accordance with the procedures and frequencies laid down in the Works' quality manual.

4.2.2.2 Inspection and test status

Procedures for the inspection and test status through the stages of manufacture shall be detailed in the Works' quality manual. These shall include procedures for the control of off-specification intermediate materials.

4.2.3 Handling, storage, packaging and delivery

The Works' quality manual shall describe the precautions taken for the protection of the quality of the cement while under the responsibility of the manufacturer. It shall include a description of the procedures used at depots. Delivery documentation shall allow traceability to the producing works.

4.3 Autocontrol testing of samples

4.3.1 Sampling and testing

The manufacturer shall operate a system of autocontrol testing for each certified cement. This system shall be used to demonstrate conformity to the requirements in the clause entitled "Conformity criteria" in the relevant product specification standard.