



**NSAI**  
Standards

Irish Standard Recommendation  
S.R. CEN/TR 14245:2014

# Cement - Guidelines for the application of EN 197-2 Conformity Evaluation

**S.R. CEN/TR 14245:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

CEN/TR 14245:2014

*Published:*

2014-09-17

*This document was published  
under the authority of the NSAI  
and comes into effect on:*

2014-10-04

ICS number:

91.100.10

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

TECHNICAL REPORT

**CEN/TR 14245**

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

September 2014

ICS 91.100.10

Supersedes CR 14245:2001

English Version

## Cement - Guidelines for the application of EN 197-2 Conformity Evaluation

Ciment - Lignes directrices pour l'application de l'EN 197-2 -  
Evaluation de la conformité

Zement - Richtlinien für die Anwendung von EN 197-2  
Konformitätsbewertung

This Technical Report was approved by CEN on 18 August 2014. It has been drawn up by the Technical Committee CEN/TC 51.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

## Page

Foreword.....	4
Introduction to this Guidelines Document .....	5
1 Scope .....	7
2 Normative references .....	7
3 Terms and definitions .....	8
4 Factory production control by the manufacturer .....	11
4.1 General requirements.....	11
4.1.1 Concept.....	11
4.1.2 Works' quality manual .....	11
4.1.3 Management systems .....	13
4.1.4 System of documentation .....	14
4.2 Internal quality control .....	15
4.2.1 Process control.....	15
4.2.2 Measuring and testing.....	17
4.2.3 Handling, storage, packaging and delivery .....	18
4.3 Autocontrol testing of samples.....	18
4.3.1 Sampling and testing .....	18
4.3.2 Corrective action.....	19
4.3.3 Measuring and test equipment for autocontrol testing .....	20
4.3.4 Quality records.....	21
5 Tasks for the product certification body .....	21
5.1 General.....	21
5.2 Continuous surveillance, assessment and evaluation of the factory production control .....	21
5.2.1 Inspection tasks.....	21
5.2.2 Frequency of inspections .....	22
5.2.3 Reports .....	22
5.3 Evaluation of the results of autocontrol testing of samples .....	23
5.3.1 Evaluation tasks.....	23
5.3.2 Number and timing of evaluations .....	23
5.3.3 Control period .....	23
5.3.4 Evaluation of test results .....	24
5.3.5 Reports .....	27
5.4 Audit testing of samples taken at the factory/depot and determination of the product-type by testing .....	27
5.4.1 Sampling.....	27
5.4.2 Number of samples.....	27
5.4.3 Properties and test methods .....	28
5.4.4 Testing .....	28
5.4.5 Evaluation of test results .....	28
5.4.6 Reports .....	29
5.4.7 Proficiency testing.....	29
5.5 Initial inspection of the factory and the factory production control .....	30
5.5.1 Inspection of a new factory .....	30
5.5.2 Inspection of an existing factory.....	31
5.5.3 Criteria for the assessment of the production equipment .....	31
5.5.4 Criteria for the assessment of laboratories .....	31
5.5.5 Reports .....	32
5.6 Evaluation of test results during the initial period.....	32

5.6.1	Initial period .....	32
5.6.2	Evaluation of test results .....	32
5.6.3	Reports .....	32
6	Actions in the event of non-conformity .....	33
6.1	Actions to be taken by the manufacturer.....	33
6.2	Actions to be taken by the product certification body .....	33
6.2.1	Following continuous surveillance, assessment and evaluation of the factory production control (see 5.2) and evaluation of the results of autocontrol testing (see 5.3) .....	33
6.2.2	Following evaluation of the results of the audit testing of samples taken at the factory/depot (see 5.4 and Annex A) .....	34
7	Procedure for third party certification of constancy of performance of the product .....	35
8	Certificate of constancy of performance of the product and conformity mark .....	36
8.1	Indication of constancy of performance of the product.....	36
8.2	Certificate of constancy of performance of the product .....	36
9	Requirements for dispatching centres.....	38
9.1	General requirements .....	38
9.2	Tasks for the intermediary.....	38
9.2.1	Measures to maintain the cement quality .....	38
9.2.2	Confirmation autocontrol testing of samples taken at the dispatching centre .....	39
9.3	Tasks for the third party .....	39
9.3.1	Continuous surveillance, assessment and evaluation of the measures to maintain the cement quality and of the confirmation autocontrol .....	39
9.3.2	Audit testing of samples taken at the dispatching centre .....	39
9.3.3	Decisions to be taken.....	39
Annex A	(normative) Evaluation of the representativeness and the accuracy of the 28 day strength test results .....	42
A.1	General .....	42
A.2	Sets of results considered.....	42
A.3	Evaluation procedure .....	42
A.3.1	Introduction.....	42
A.3.2	Symbols.....	42
A.3.3	Evaluation of whether set A and set B belong to the same population (sampling error check) .....	43
A.3.4	Comparison between set B and set C in order to check the accuracy of the autocontrol testing (testing error check) .....	44
A.3.5	Masonry cement .....	44
A.3.6	Calcium aluminate cement .....	44
Annex B	(informative) Procedure for certification of constancy of performance of cement .....	45
Annex C	(informative) Comparison of terminology according to the CPD and the CPR.....	46

**CEN/TR 14245:2014 (E)**

## **Foreword**

This document (CEN/TR 14245:2014) has been prepared by Technical Committee CEN/TC 51 “Cement and building limes”, the secretariat of which is held by NBN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CR 14245:2001.

Compared with CR 14245:2001, the following changes have been made:

— Guidelines harmonized with EN 197-2:2014 and standard text of EN 197-2:2014 included.

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

## Introduction to this Guidelines Document

### ***Purpose***

The purpose of this Guidelines Document is to provide explanatory detail on points not fully elaborated in EN 197-2. It is intended for use by manufacturers and by product certification bodies involved in the certification of cement following EN 197-2, in particular for the issuing of an EC certificate of constancy of performance.

This document does not deal with the necessary internal procedures that the product certification bodies will have.

It is an objective of this Guidelines Document that its use will assist in the establishment of equivalent procedures for certification of cement. It is expected that, following this document, traditional good procedures and practices that may be different can continue to be used, provided that they are not in contradiction with EN 197-2 and the relevant product specification standard. Such existing good procedures and practices, applied in conjunction with these Guidelines, are not considered to be an impediment to the achievement of the uniform level of certification throughout Europe, and by different product certification bodies, that is expected from the application of EN 197-2 together with these Guidelines.

This Guidelines Document is based on existing situations for production, evaluation of conformity and certification of cements. It may happen that product certification bodies be confronted by a situation different to those included in this document. In such a case, specific procedures should be elaborated on a case by case situation and be approved and fully recorded by the product certification body. These specific procedures should always fulfil the requirements of EN 197-1 and EN 197-2 and lead to the same level of confidence in product conformity that would be achieved by application of this Guidelines Document.

### ***Arrangement***

The clause numbering system of EN 197-2 is followed. The text of each of the clauses of the European Standard is reproduced in full and is followed by guidance, which is provided only for those clauses where clarification or elaboration is needed.

### ***Clauses of EN 197-2***

Foreword

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Factory production control by the manufacturer
- 5 Tasks for the product certification body
- 6 Actions in the event of non-conformity
- 7 Procedure for third party certification of constancy of performance of the product
- 8 Certificate of constancy of performance of the product and conformity mark
- 9 Requirements for dispatching centres

Tables 1 and 2

Annexes A, B, and C.

## **Foreword**

This document (EN 197-2:2014) has been prepared by Technical Committee CEN/TC 51 “Cement and building limes”, 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 July 2014, and conflicting national standards shall be withdrawn at the latest by July 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 197-2:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

Compared to the version EN 197-2:2000, the following major changes have been made in this document:

- use of the terminology given by the Construction Products Regulation (Regulation (EU) No 305/2011) and comparison with the earlier terminology according to the Construction Products Directive (Directive 89/106/EEC) (Annex C);
- link between this European Standard and Annexes ZA of European Standards covering cements;
- guidance concerning the uncertainty of measurements in the evaluation of test results;
- numerical criteria for the evaluation procedure for calcium aluminate cement conforming to EN 14647, (Annex A);
- figure describing the procedure for certification of constancy of performance of cement in a new factory or of a new type of cement in an existing factory (Annex B).

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



## 1 Scope

This European Standard specifies the scheme for the assessment and verification of constancy of performance (AVCP) of cements to their corresponding product specification standards, including certification of constancy of performance by a product 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 product certification body. It also provides rules for actions to be followed in the event of non-conformity, the procedure for the AVCP and requirements for dispatching centres.

In this European Standard, 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 this European Standard 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.

The guidelines given in the Technical Report CEN/TR 14245 [1]<sup>1)</sup> should be used for the application of this European Standard.

This European Standard should be linked with Annexes ZA of European Standards covering cements and binders, i.e. EN 197-1, EN 14216, EN 14647, EN 413-1, EN 15743, in particular for the assignments of tasks to the manufacturer and to the product certification body.

**NOTE** The reason for having drafted this separate document is that the provisions it includes are applicable to different products covered by different European Standards.

### **Guidance**

EN 197-2 deals with the evaluation of conformity of cements and binders that are submitted for certification. It deals in particular with cases where “further testing” of the product is undertaken, as is the case for attestation system 1+ under the Construction Products Regulation. The products for which EN 197-2 is applicable are: the common cement products and the low heat cements and the sulfate resisting cements, refer to EN 197-1, the very low heat special cements, refer to EN 14216, the supersulfated cements, refer to EN 15743, the calcium aluminate cements, refer to EN 14647, and the masonry cements, refer to EN 413-1.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 413-1, *Masonry cement - Part 1: Composition, specifications and conformity criteria*

EN 14647, *Calcium aluminate cement - Composition, specifications and conformity criteria*

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

---

<sup>1)</sup> CEN/TR 14245 is currently in preparation and will revise CR 14245:2001.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-