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**SANS 50196-4:1993**

Edition 1 and nat. amdt 1

**ENV 196-4:1993**

Edition 2

Any reference to SABS ENV 196-4 is deemed  
to be a reference to this standard  
(Government Notice No. 1373 of 8 November 2002)

# **SOUTH AFRICAN NATIONAL STANDARD**

## **Methods of testing cement**

### **Part 4: Quantitative determination of constituents**

This national standard is the identical implementation of ENV 196-4:1993 and is adopted with the permission of CEN, rue de Stassart 36, B-1050 Brussels.

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**Table of changes**

<b>Change No.</b>	<b>Date</b>	<b>Scope</b>
Nat. amdt 1	2007	Amended to change the designation from SABS to SANS, with no technical changes.

**National foreword**

This South African standard was approved by National Committee StanSA SC 5120.61A, *Construction standards — Cement, lime and concrete*, in accordance with procedures of Standards South Africa, in compliance with annex 3 of the WTO/TBT agreement.

This part of SANS 50196 was published in March 2007. This SANS edition is technically identical to the first SABS edition (SABS ENV 196-4:1993).

EUROPEAN PRESTANDARD

**ENV 196-4:1993**

PRÉNORME EUROPÉENNE

EUROPÄISCHE VORNORM

July 1993

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Supersedes ENV 196-4:1989

Descriptors: Cement, determination, components, slags, cement clinker, pozzolans, ashes, tests

English version

### **Methods of testing cement - Part 4: Quantitative determination of constituents**

Méthodes d'essais des ciments - Partie 4:  
Détermination quantitative des constituants

Prüfverfahren für Zement - Teil 4: Quantitative  
Bestimmung der Bestandteile

This European Prestandard (ENV) was approved by CEN on 1993-01-08 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into an European Standard (EN).

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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 Prestandard was drawn up by Technical Committee CEN/TC 51 "Cement and building lime" the Secretariat of which is held by IBN. It is a revision of the European Prestandard ENV 196-4 of December 1989.

The main aim of this revision was to adapt the reference method in such a way that it would be qualitative and quantitative whatever the constituent materials, including blastfurnace slag (which was not the case for ENV 196-4 : 1989). This entailed recasting the analytical procedure and the calculation of the contents.

The opportunity was taken at the same time to unify the presentation of the different methods, reference and alternative, and to endeavour to standardize better the formation of the symbolic notations so that all ambiguity in the interpretation of the formulae for the calculations was ruled out.

According to the Common CEN/CENELEC Rules, the following countries are bound to announce this European Prestandard :

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

The European Standard EN 196 on methods of testing cement consists of the following Parts:

- Part 1 : Determination of strength
- Part 2 : Chemical analysis of cement
- Part 3 : Determination of setting time and soundness
- Part 4 : Quantitative determination of constituents
- Part 5 : Pozzolanicity test for pozzolanic cements
- Part 6 : Determination of fineness
- Part 7 : Methods of taking and preparing samples of cement
- Part 21: Determination of the chloride, carbon dioxide and alkali content of cement