

**Tillsatsmedel till betong, bruk och injekterings-
bruk – Provning –**
Del 12: Alkali-innehåll

Admixtures for concrete, mortar and grout –
Test methods –
Part 12: Determination of the alkali content of
admixtures

Europastandarden EN 480-12:2005 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 480-12:2005.

Denna standard ersätter SS-EN 480-12, utgåva 1.

The European Standard EN 480-12:2005 has the status of a Swedish Standard. This document contains the official English version of EN 480-12:2005.

This standard supersedes the Swedish Standard SS-EN 480-12, edition 1.

Upplysningar om **sakinnehållet** i standarden lämnas av SIS, Swedish Standards Institute, telefon 08 - 555 520 00.

Standarder kan beställas hos SIS Förlag AB som även lämnar **allmänna upplysningar** om svensk och utländsk standard.

Postadress: SIS Förlag AB, 118 80 STOCKHOLM
Telefon: 08 - 555 523 10. *Telefax:* 08 - 555 523 11
E-post: sis.sales@sis.se. *Internet:* www.sis.se

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 480-12

October 2005

ICS 91.100.10; 91.100.30

Supersedes EN 480-12:1997

English Version

Admixtures for concrete, mortar and grout - Test methods - Part 12: Determination of the alkali content of admixtures

Adjuvants pour béton, mortiers et coulis - Méthodes d'essai
- Partie 12: Détermination de la teneur en alcalis dans les
adjuvants

Zusatzmittel für Beton, Mörtel und Einpressmörtel -
Prüfverfahren - Teil 12: Bestimmung des Alkaligehalts von
Zusatzstoffen

This European Standard was approved by CEN on 28 July 2005.

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, 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.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
Foreword	3
1 Scope	4
2 Normative references	4
3 Principle	4
4 Reagents	5
5 Apparatus	6
6 Preparation of calibration graphs	6
7 Test procedure	6
8 Test report	8
Bibliography	9

Foreword

This European Standard (EN 480-12:2005) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", the secretariat of which is held by DIN.

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 April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

It has been drafted by Subcommittee 3 (SC 3) of TC 104 "Admixtures for concrete, mortar and grout".

This document is part of the series EN 480 "Admixtures for concrete, mortar and grout – Test methods" which comprises the following

Part 1 *Reference concrete and reference mortar for testing*

Part 2 *Determination of setting time*

Part 4 *Determination of bleeding of concrete*

Part 5 *Determination of capillary absorption*

Part 6 *Infrared analysis*

Part 8 *Determination of the conventional dry material content*

Part 10 *Determination of water soluble chloride content*

Part 11 *Determination of air void characteristics in hardened concrete*

Part 12 *Determination of the alkali content of admixtures*

Part 13 *Reference masonry mortar for testing mortar admixtures*

Part 14 *Admixtures for concrete, mortar and grout - Test methods - Part 14: Measurement of corrosion susceptibility of reinforcing steel in concrete - Potentiostatic electro-chemical test method ¹⁾*

This document is applicable together with the other standards of the EN 480 series.

This document supersedes EN 480-12:1997.

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.

1) This part is under preparation

EN 480-12:2005 (E)

1 Scope

This document specifies a method for the determination of the alkali (sodium and potassium) content of admixtures for concrete, mortar and grouts in accordance with the series EN 934.

2 Normative references

The following referenced documents are indispensable for the application 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 196-2, *Methods of testing cement – Determination of the chloride, carbon dioxide and alkali content of cement.*

ISO 648, *Laboratory glassware – One-mark pipettes.*

ISO 1042, *Laboratory glassware – One-mark volumetric flasks.*

3 Principle

An atomic absorption spectrophotometer is used to measure the sodium and potassium in dilute nitric acid extracts from admixtures. The extract is nebulised into an air/acetylene flame and the absorption of sodium or potassium radiation as it passes through the flame is measured. The amount of absorption is directly proportional to the sodium or potassium content of the extract at low concentrations. The sodium and potassium contents are separately measured and their sum, proportioned by molecular mass, is reported as the total equivalent Na_2O (alkali) content.

As an alternative to an atomic absorption spectro-photometer a suitable calibrated flame photometer can be used for the determination of sodium and potassium in the test solutions prepared in accordance with this document.