

Admixtures for concrete, mortar and grout —

Part 2: Concrete admixtures — Definitions, requirements, conformity, marking and labelling

The European Standard EN 934-2:2001, with the incorporation of amendments A1:2004 and A2:2005, has the status of a British Standard

ICS 91.100.99

National foreword

This British Standard is the official English language version of EN 934-2:2001, including amendments A1:2004 and A2:2005. It supersedes BS EN 934-2:1998 which is withdrawn.

The start and finish of text introduced or altered by CEN amendment is indicated in the text by tags $\langle A_1 \rangle$ $\langle A_1 \rangle$. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by $\langle A_1 \rangle$ $\langle A_1 \rangle$.

EN 934-2:2001 is a candidate “harmonized” European Standard and fully takes into account the requirements of the European Commission mandate M128. Products related to concrete, mortar and grout, given under the EU Construction Products Directive (89/106/EEC), and intended to lead to CE marking. The date of applicability of EN 934-2:2001 as a “harmonized” European Standard, i.e. the date after which this standard may be used for CE marking purposes, is subject to an announcement in the *Official Journal of the European Communities*.

EN 934-2:2001 is the subject of transitional arrangements agreed under the European Commission mandate. The Member States have agreed a nominal transition period for the co-existence of EN 934-2:2001 and their corresponding national standard(s). It is intended that this period will comprise a nominal nine month period during which any required changes to national regulations are to be made, followed by a further nominal twelve month period for the implementation of CE marking. At the end of this co-existence period, the national standard(s) will be withdrawn. In the UK, the corresponding national standards are:

- BS 5075-1:1982, *Concrete admixtures — Part 1: Specification for accelerating and retarding water-reducing admixtures*;
- BS 5075-3:1985, *Concrete admixtures — Part 3: Specification for superplasticizing admixtures*.

As these corresponding national standards have already been amended following partial replacement by EN 934-2:1997 and EN 934-6:2000, it has been decided by the responsible BSI subcommittee (B/517/3) that, in the UK, the full 21 month transition period is unnecessary. Instead, only the nominal nine month transition period, set aside to allow required changes to national regulations to be made, is necessary. Based on this nominal nine month transition period BS 5075-1:1982 and BS 5075-3:1985 would be withdrawn in May 2002.

NOTE This date is approximate. Users of this standard should contact BSI Customer Services for confirmation of withdrawal.

This British Standard, having been prepared under the direction of the Sector Policy and Strategy Committee for Building and Civil Engineering, was published under the authority of the Standards Policy and Strategy Committee on 19 September 2001

© BSI 2006

ISBN 0 580 38464 0

Amendments issued since publication

Amd. No.	Date	Comments
15448	18 November 2004	See national foreword
16400	31 May 2006	See national foreword
16490 Corrigendum No. 1	30 June 2006	Correction to formatting errors at printing stage

The UK participation in its preparation was entrusted by Technical Committee B/517, Concrete, to Subcommittee B/517/3, Admixtures, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Additional information

Attention is drawn to the fact that the requirements for admixtures covered by EN 934-2:1997 are unchanged in EN 934-2:2001. However, EN 934-2:2001 also includes requirements for dual function admixtures not covered by EN 934-2:1997.

Attention is also drawn to the requirements for corrosion behaviour in Table 1 (item number 10) and Table ZA.1. It states that until there is an accepted European Standard, the national regulations in place of use apply. As the UK has no national regulations in respect of this characteristic, then no testing is required for products sold in the UK and it is acceptable to record “no performance determined” (NPD), with regard to this characteristic, in the information accompanying the CE marking. However, if the product is to be placed on the market in EU or EFTA member states where there are national regulations for this characteristic, then testing is required in accordance with those regulations.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 23 and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

English version

**Admixtures for concrete, mortar and grout - Part 2: Concrete
admixtures - Definitions, requirements, conformity, marking and
labelling**
(including amendments A1:2004 and A2:2005)

Adjuvants pour béton, mortier et coulis - Partie 2: Adjuvants
pour béton - Définitions, exigences, conformité, marquage
et étiquetage
(inclut les amendements A1:2004 et A2:2005)

Zusatzmittel für Beton, Mörtel und Einpressmörtel - Teil 2:
Betonzusatzmittel - Definitionen, Anforderungen,
Konformität, Kennzeichnung und Beschriftung
(enthält Änderungen A1:2004 und A2:2005)

This European Standard was approved by CEN on 2 May 2001. Amendment A1 was approved by CEN on 29 July 2004 and Amendment A2 was approved on 20 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 Management Centre 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 Management Centre 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	5
2 Normative references	5
3 Terms and definitions	6
4 Requirements	8
4.1 General requirements	8
4.2 Requirements for specific types of admixtures	8
4.3 Release of dangerous substances	14
5 Sampling	14
6 Conformity control	14
7 Evaluation of conformity	14
8 Marking and labelling	16
8.1 General	16
8.2 Designation of admixtures	16
8.3 Additional information	16
Annex A (informative) - Release of dangerous substances	17
Annex ZA (informative) -Provisions for the CE-marking of admixtures for concrete under the EU Construction Products Directive	18
ZA.1 Clauses of this European standard addressing the provisions of the EU Construction Products Directive	18
ZA.2 Procedure for attestation of conformity of admixtures for concrete	21
ZA.3 CE marking and labelling	22
Table	
Table 1 – General Requirements	9
Table 2 – Specific requirements for water reducing/plasticizing admixtures (at equal consistence)	10
Table 3.1 – Specific requirements for high range water reducing/super plasticizing admixtures (at equal consistence)	10
Table 3.2 – Specific requirements for high range water reducing/super plasticizing admixtures (at equal w/c ratio)	10
Table 4 – Specific requirements for water retaining admixtures (at equal consistence)	11
Table 5 – Specific requirements for air entraining admixtures (at equal consistence)	11
Table 6 – Specific requirements for set accelerating admixtures (at equal consistence)	11
Table 7 – Specific requirements for hardening accelerating admixtures (at equal consistence)	12
Table 8 – Specific requirements for set retarding admixtures (at equal consistence)	12
Table 9 – Specific requirements for water resisting admixtures (at equal consistence or equal w/c ratio)	12
Table 10 – Specific requirements for set retarding/water reducing/plasticizing admixtures (at equal consistence)	13
Table 11.1 – Specific requirements for set retarding/high range water reducing/ super-plasticizing admixtures (at equal consistence)	13
Table 11.2 – Specific requirements for set retarding/high range water reducing/ super-plasticizing admixtures (at equal w/c ratio)	13
Table 12 – Specific requirements for set accelerating/water reducing/plasticizing admixtures (at equal consistence)	14
Table 13 – Minimum frequency of test for the factory production control of concrete admixtures according to EN 934-2	15
Table ZA.1 – Scope and relevant clauses of this standard	19
Table ZA.2 – System of attestation of conformity	21
Table ZA.3 – Assignment of evaluation of conformity tasks	21

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 104 "Concrete", 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 January 2002, and conflicting national standards shall be withdrawn at the latest by April 2003.

This European Standard supersedes EN 934-2:1997.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s) see informative annex ZA which is an integral part of this standard.

This standard is a part of the series EN 934 "Admixtures for concrete, mortar and grout" which additionally comprises the following parts

- Part 3 Admixtures for masonry mortar - Definitions, requirements, conformity, marking and labelling
- Part 4 Admixtures for grout for prestressing tendons - Definitions, requirements, conformity, marking and labelling
- Part 5 Admixtures for sprayed concrete - Definitions, requirements, conformity, marking and labelling
- Part 6 Sampling, conformity control and evaluation of conformity

This European Standard is used with the standards of the EN 480 series which comprises test methods for admixtures.

The annexes A and ZA are 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.

Foreword to amendment A1

This document (EN 934-2:2001/A1:2004) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", the secretariat of which is held by DIN.

This Amendment to the European Standard EN 934-2:2001 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2005, and conflicting national standards shall be withdrawn at the latest by April 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

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.

Foreword to amendment A2

This European Standard (EN 934-2:2001/A2:2005) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, the secretariat of which is held by DIN.

This Amendment to the European Standard EN 934-2:2001 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This European Standard covers matters for which the need for amendments or corrections to EN 934-2:2001-07 has been identified by CEN/TC 104 “Concrete and related products”.

The numbering and headlines in the following correspond to those in EN 934-2 for which the amendments and corrections apply.

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 Scope

This European Standard specifies definitions and requirements for admixtures for use in concrete.

It covers admixtures for plain, reinforced and prestressed concrete which are used in site mixed, ready mixed concrete and precast concrete.

The performance requirements in this standard apply to admixtures used in concrete of normal consistence. They may not be applicable to admixtures intended for other types of concrete such as semi-dry and earth moist mixes.

Provisions governing the practical application of admixtures in the production of concrete, i. e. requirements concerning composition, mixing, placing, curing etc. of concrete containing admixtures are not part of this standard.

2 Normative references

This European Standard 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 this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 480-1, *Admixtures for concrete, mortar and grout - Test methods - Part 1: Reference concrete and reference mortar for testing.*

EN 480-2, *Admixtures for concrete, mortar and grout - Test methods - Part 2: Determination of setting time.*

EN 480-4, *Admixtures for concrete, mortar and grout - Test methods - Part 4: Determination of bleeding of concrete.*

EN 480-5, *Admixtures for concrete, mortar and grout - Test methods - Part 5: Determination of capillary absorption.*

EN 480-6, *Admixtures for concrete, mortar and grout - Test methods - Part 6: Infrared analysis.*

EN 480-8, *Admixtures for concrete, mortar and grout - Test methods - Part 8: Determination of the conventional dry material content.*

EN 480-10, *Admixtures for concrete, mortar and grout - Test methods - Part 10: Determination of the water soluble chloride content.*

EN 480-11, *Admixtures for concrete, mortar and grout - Test methods - Part 11: Determination of air void characteristics in hardened concrete.*

EN 480-12, *Admixtures for concrete, mortar and grout - Test methods - Part 12: Determination of the alkali content of admixtures.*

EN 934-6:2001, *Admixtures for concrete, mortar and grout - Part 6: Sampling, conformity control and evaluation of conformity.*

prEN 1015-13:1993, *Methods of test for mortar for masonry - Part 13: Determination of the dimensional stability of hardened mortars.*

EN 12350-2, *Testing fresh concrete - Part 2: Slump test.*

EN 12350-5, *Testing fresh concrete - Part 5: Flow table test.*