



SLOVENSKI STANDARD

SIST EN 934-3:2004

01-april-2004

Prečiščena različica slovenskega standarda SIST EN 934-3:2004, ki je istovetna z evropskim standardom EN 934-3:2003.

Admixtures for concrete, mortar and grout - Part 3: Admixtures for masonry mortar - Definitions, requirements, conformity, marking and labelling

Zusatzmittel für Beton, Mörtel und Einpressmörtel - Teil 3: Zusatzmittel für Mauermörtel - Definitionen, Anforderungen, Konformität, Kennzeichnung und Beschriftung

ITeh STANDARD PREVIEW

Adjuvants pour béton, mortier et coulis - Partie 3: Adjuvants pour mortier a maçonner - Définitions, exigences, conformité, marquage et étiquetage

[SIST EN 934-3:2004](https://standards.iteh.ai/catalog/standards/sist/c4e4121d-e2c4-4c88-a5c9-ab7b857db080/sist-en-934-3-2004)

Ta slovenski standard je istoveten z: [EN 934-3:2003](https://standards.iteh.ai/catalog/standards/sist/c4e4121d-e2c4-4c88-a5c9-ab7b857db080/sist-en-934-3-2004)

ICS:

01.040.91

91.100.10

SIST EN 934-3:2004

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 934-3:2004

<https://standards.iteh.ai/catalog/standards/sist/c4e4121d-e2c4-4c88-a5c9-a84b837db080/sist-en-934-3-2004>

ICS 01.040.91; 91.100.10

English version

**Admixtures for concrete, mortar and grout - Part 3: Admixtures
for masonry mortar - Definitions, requirements, conformity,
marking and labelling**

Adjuvants pour béton, mortier et coulis - Partie 3: Adjuvants
pour mortier de montage - Définitions, exigences,
conformité, marquage et étiquetage

Zusatzmittel für Beton, Mörtel und Einpressmörtel - Teil 3:
Zusatzmittel für Mauermörtel - Definitionen, Anforderungen,
Konformität, Kennzeichnung und Beschriftung

This European Standard was approved by CEN on 3 April 2003.

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

<https://standards.iteh.ai/catalog/standards/sist/c4e4121d-e2c4-4c88-a5c9-a84b837db080/sist-en-934-3-2004>



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

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

Contents

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions.....	5
4 Requirements	5
5 Sampling.....	7
6 Conformity control.....	7
7 Evaluation of conformity.....	8
8 Marking and labelling	8
8.1 General.....	8
8.2 Designation of admixtures.....	8
8.3 Additional information.....	9
Annex A (informative) Content and release of dangerous substances.....	10
Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive ZA.1	11
ZA.1 Scope and relevant characteristics	11
ZA.2 Procedure for attestation of conformity of admixtures for masonry mortar	12
ZA.2.1 System of attestation of conformity.....	12
ZA.2.2 EC certificate and declaration of conformity.....	13
ZA.3 CE marking and labelling	14

Foreword

This document (EN 934-3:2003) 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 June 2004, and conflicting national standards shall be withdrawn at the latest by April 2005.

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

- Part 2: Concrete admixtures - Definitions, requirements, conformity, marking and labelling
- Part 4: Admixtures for grout for prestressing tendons – Definitions, requirements, conformity and marking and labelling
- Part 5: Admixtures for sprayed concrete – Definitions, requirements, conformity and marking and labelling
- Part 6: Sampling, conformity control, evaluation of conformity

This European Standard is used with the standards of the EN 480 series which comprise 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This Draft European Standard defines and specifies the requirements and conformity criteria for admixtures for use in cement based masonry mortar.

It covers two types of admixtures, long term retarding and air entraining/plasticising which are used in ready-mixed and site made masonry mortars.

Provisions for the use of admixtures for masonry mortar are not part of this standard but are covered by EN 998-2.

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.

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 conventional dry material content.*

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

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

EN 480-13, *Admixtures for concrete, mortar and grout — Test methods — Part 13: Reference masonry mortar for testing mortar admixtures.*

EN 934-2, *Admixtures for concrete, mortar and grout — Part 2: Concrete admixtures — Definitions, requirements, conformity and marking and labelling.*

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

EN 998-1:2003, *Specification for mortar for masonry — Part 1: Rendering and plastering mortar.*

EN 998-2:2003, *Specification for mortar for masonry — Part 2: Masonry mortar.*

EN 1015-4, *Methods of test for mortar for masonry — Part 4: Determination of consistence of fresh mortar (by plunger penetration).*

EN 1015-7, *Methods of test for mortar for masonry — Part 7: Determination of air content of fresh mortar.*

EN 1015-9, *Methods of test for mortar for masonry — Part 9: Determination of workable life and correction time of fresh mortar.*

EN 1015-11, *Methods of test for mortar for masonry — Part 11: Determination of flexural and compressive strength of hardened mortar.*

ISO 758, *Liquid chemical products for industrial use — Determination of density at 20 °C.*

ISO 1158, *Plastics — Vinyl chloride homopolymers and copolymers — Determination of chlorine content.*

ISO 4316, *Surface active agents — Determination of pH of aqueous solutions — Potentiometric method.*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1

Air entraining/plasticizing admixture

Admixture which increases workability, or allows water reduction, by incorporating during mixing a controlled quantity of small, uniformly distributed air bubbles which remain after hardening.

3.2

Set retarding admixture for long term retarded masonry mortar

Set retarding admixture as defined in EN 934-2 but specifically intended for use in long term retarded mortar incorporating entrained air.

3.3

Performance

Ability of an admixture to be effective in its intended use without detrimental effect.

3.4

Compliance dosage

The dosage of an admixture, expressed in % by mass of cement, stated by the manufacturer, which will meet the requirements of this standard. The compliance dosage is within the recommended range of dosage.

3.5

Recommended range of dosage

dosages between limits, expressed in % by mass of cement, which the manufacturer recommends for the product based on experience on site.

NOTE The use of the recommended dosage does not imply that compliance with this standard will be achieved over the whole range. Trial tests should be carried out with the materials to be used on site, to find the dosage necessary to achieve the required result.

<https://standards.iteh.ai/catalog/standards/sist/c4e4121d-e2c4-4c88-a5c9-a84b837db080/sist-en-934-3-2004>

3.6

Maximum recommended dosage

Upper limit of the recommended range of dosage.

4 Requirements

Masonry mortar admixtures, when sampled in accordance with EN 934-6, shall comply with the requirements in table 1 using the test methods listed therein. Additional requirements specific to different types of mortar admixtures are included in tables 2 and 3.

NOTE 1 Test should be carried out with the admixtures and other materials intended to be used in the mortar to check whether the desired effect can be obtained.

For content of substances and release of substances from the hardened mortar which are dangerous to health, hygiene and the environment see Annex A (informative).

NOTE 2 For requirements necessary for CE-marking see Annex ZA.

Table 1 — General requirements

	Property	Test method	Requirement ^a
1	Homogeneity	Visual	Homogeneous when used. Segregation shall not exceed the limit declared by the manufacturer
2	Colour	Visual	Uniform and similar to the description provided by the manufacturer
3	Effective component	EN 480-6	IR spectrum to show no significant change with respect to the effective component when compared to the reference spectrum provided by the manufacturer
4	Relative density (for liquids only)	ISO 758	$D \pm 0,03$ if $D > 1,10$ $D \pm 0,02$ if $D \leq 1,10$ where D is the value declared by the manufacturer
5	Conventional dry material content	EN 480-8	$0,95T \leq X \leq 1,05T$ for $T \geq 20$ % $0,90T \leq X \leq 1,10T$ for $T < 20$ % where T is the value in % by mass declared by the manufacturer and X is the test result in % by mass
6	pH value	ISO 4316	Value declared by the manufacturer ± 1 or within the range declared by the manufacturer
7	Total chlorine ^b	ISO 1158 ^c	Not above the value declared by the manufacturer ^f
8	Water soluble chloride (Cl ⁻)	EN 480-10	Not above the value declared by the manufacturer ^f
9	Alkali content (Na ₂ O equivalent)	EN 480-12 ^d	not above the value declared by the manufacturer
10	Corrosion behaviour	^e	No corrosion promoting effects on steel embedded in mortar

^a Values declared by the manufacturer shall be documented and provided to the user on request.

^b If there is no significant difference between total chlorine content and water soluble chloride content, only the water soluble chloride content shall be determined in subsequent tests on the admixture involved.

^c The procedure in ISO 1158 shall be modified as follows:
— In crease the sample size to 0,1 g of dry admixtures.
— Use silver nitrate and amonium thiocyanate solution 0,01 N.

^d For testing, CEM I with C₃A content less than 5 % by mass shall be used.

^e Until there is an accepted European Standard the national regulations in the place of use shall apply.

^f Where the chloride content is $\leq 0,10$ % m/m the admixture may be described as "chloride free".

Table 2 — Additional requirements for air entraining/plasticizing admixtures at equal consistence

	Property	Reference mortar	Test method	Requirement ^a
1	Air content after standard mixing	EN 480-13	EN 1015-7 method A	Total air content $A_1 = (17 \pm 3)$ % by volume
2	Air content after 1 h standing	EN 480-13	EN 1015-7 method A	$\geq A_1 - 3$ %
3	Air content after extended mixing	EN 480-13	EN 1015-7 method A	$\leq A_1 + 5$ % and $\geq A_1 - 5$ %
4	Reduction in water requirement for standard consistence	EN 480-13	EN 480-13	≥ 8 % by mass
5	Compressive strength at 28 days	EN 480-13	EN 1015-11	Test mix ≥ 70 % of control mix

^a All requirements apply to the same test mix.

Table 3 — Additional requirements for admixtures for long term retarded, ready to use mortar at equal consistence

	Property	Reference mortar	Test method	Requirement ^a
1	Air content after standard mixing	EN 480-13	EN 1015-7 method A	Total air content $A_2 = (17 \pm 3) \%$ by volume
2	Air content after extended mixing	EN 480-13	EN 1015-7 method A	$\leq A_2 + 5 \%$ and $\geq A_2 - 5 \%$
3	Consistence after 28 h standing ^b	EN 480-13	EN 1015-4	Within 15 mm of initial value
4	Air content after 28 h standing	EN 480-13	EN 1015-7 method A	$\geq 0,70A_2 \%$
5	Resistance to penetration after 52 hours ^c	EN 480-13	EN 1015-9	Test mix $\geq 5 \text{ N/mm}^2$
6	Compressive strength at 28 days	EN 480-13	EN 1015-11	Test mix $\geq 70 \%$ of control mix

^a All requirements apply to the same test mix.

^b When stored and remixed, as for determination of air content, after 28 h standing.

^c When stored in a covered mould to prevent evaporation of water.

iTech STANDARD PREVIEW
(standards.itech.ai)

5 Sampling

SIST EN 934-3:2004

Requirements for sampling are given in EN 934-6:2001, clause 4.
<http://standards.itech.ai/catalog/standards/sist-en-934-3-2004>

6 Conformity control

Requirements for conformity control are given in EN 934-6:2001, clauses 5.3 and 5.4. The frequency of testing in connection with the factory production control is given in table 4.

Table 4 — Minimum frequency of test for factory production control

Tests	Air entraining/ plasticizing admixture	Admixture for long term retarded, ready to use mortar
Homogeneity, colour	B	B
Relative density (for liquids only)	B	B
Conventional dry material content	B	B
pH value (for liquids only)	B	B
Chloride content (Cl) ^a	4	4
Compressive strength at 28 days	1	1
Air content after standard mixing	A	A
Air content after 1 h standing	A	–
Air content after 28 h standing	–	A
Air content after extended mixing	A	A