



SLOVENSKI STANDARD

SIST EN 934-6:2002

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PSIST prEN 934-6:1998

Admixture for concrete, mortar and grout - Part 6: Sampling, conformity control and evaluation of conformity

Zusatzmittel für Beton, Mörtel und Einpressmörtel - Teil 6: Probenahme, Konformitätskontrolle und Bewertung der Konformität

Adjuvants pour béton, mortier et coulis - Partie 6: Échantillonnage, contrôle et évaluation de la conformité

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Ta slovenski standard je istoveten z: EN 934-6:2001

ICS:

91.100.10	Cement. Mavec. Apno. Malta	Cement. Gypsum. Lime. Mortar
91.100.30	Beton in betonski izdelki	Concrete and concrete products

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 934-6

July 2001

ICS 91.100.10; 91.100.30

Supersedes EN 934-6:2000

English version

Admixtures for concrete, mortar and grout - Part 6: Sampling, conformity control and evaluation of conformity

Adjuvants pour béton, mortier et coulis - Partie 6:
Echantillonnage, contrôle et évaluation de la conformité

Zusatzmittel für Beton, Mörtel und Einpressmörtel - Teil 6:
Probenahme, Konformitätskontrolle und Bewertung der
Konformität

This European Standard was approved by CEN on 2 May 2001.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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EN 934-6:2001 (E)

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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 January 2002.

This European Standard supersedes EN 934-6:2000.

This 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 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

Annex A is 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.

1 Scope

This European Standard specifies procedures for sampling, conformity control and evaluation of conformity, for admixtures according to the series EN 934.

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 934-2:2001, *Admixtures for concrete, mortar and grout - Part 2: Concrete admixtures - Definitions, requirements, conformity, marking and labelling.*

prEN 934-3:1998, *Admixtures for concrete, mortar and grout - Part 3: Admixtures for masonry mortar - Definitions, requirements and conformity.*

EN 934-4:2001, *Admixtures for concrete, mortar and grout - Part 4: Admixtures for grout for prestressing tendons – Definitions, requirements, conformity, marking and labelling.*

prEN 934-5:1998, *Admixtures for concrete, mortar and grout - Part 5: Admixtures for sprayed concrete - Definitions, specifications and conformity criteria.*

3 Terms and definitions

For the purposes of this standard, the following term and definition applies.

3.1

batch

a quantity of admixture which can be considered to have a uniform composition

Note A tank load can be considered as the equivalent of a batch.

4 Sampling

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4.1 General

Sampling of admixtures shall be carried out in such a way that the resulting sample is representative of the batch to be inspected.

If required, sampling shall be carried out in the presence of representatives from all parties involved.

4.2 Sampling from the manufacturer's stock

4.2.1 General

Each sample shall represent not more than one batch. For continuous production of an admixture one sample taken from up to 25 t may be regarded as representative.

4.2.2 Powder admixture (in packages)

The sample shall be composed of sub-samples from 6 packages (bags) or if the total number of packages (bags) is less than 6, from all packages (bags). The sub-samples are to be taken from packages (bags) distributed at random throughout the consignment.

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One of the following procedures shall be applied:

- Where the packages contain up to 500 g take all the contents of each package.
- Where the packages contain more than 500 g, use one of the following methods:
 - a) insert a sampling tube, which takes a core not less than 25 mm in diameter, into the packages so that it takes a core of the material from substantially the entire length of the package.
 - b) empty one of the packages to be sampled on to a clean dry surface and mix the material. Take at least three portions of not less than 125 g each from different parts of the heap.

The method given in a) is the preferred method, but if a sampling tube is not available, the method given in b) shall be used.

Repeat the procedure with each of the other packages to be sampled and thoroughly mix the sub-samples obtained to form one bulk sample. If the bulk sample exceeds 3 kg it shall be reduced to 3 kg, either by coning and quartering or by use of a sample splitter.

Divide the sample into three equal parts and place each part in a clean, air tight, labelled container. At least one container holding 1 kg shall be kept for future reference. Store container(s) in a place that is protected from moisture, heat and light for one year or until the use-by date whichever is the shorter period.

4.2.3 Liquid admixture**4.2.3.1 General**

In order to achieve representative samples of liquid admixtures one of the following procedures shall be applied.

4.2.3.2 Sampling of a liquid admixture from containers

The sample shall be composed of sub-samples taken from 6 containers or if the total number of containers is less than 6 from all containers. The sub-samples are to be taken from containers distributed at random throughout the consignment.

Agitate the admixtures in the containers to disperse all lightly settled material. Disregard all deposits which are not readily brought into suspension by such agitation.

Without delay, take sub-samples from the selected containers by one of the following procedures:

- a) where containers hold up to 0,5 l, take the total contents;
- b) Where containers hold more than 0,5 l take 0,5 l of the liquid from each container, combine the sub-samples obtained in this way and mix them thoroughly to form one bulk sample.

4.2.3.3 Sampling of a liquid admixture from a tank load

When the load is agitated one sample may represent the entire tank load of up to 25 000 l. The bulk sample shall be at least 3 l.

Otherwise three samples shall be taken as follows: one from the top level, one within ± 300 mm of the mid-level of the fluid and one within 400 mm of the bottom of the tank. Each sample shall be not less than 1 l. Thoroughly mix the three samples until they form one homogeneous bulk sample.

4.2.3.4 Division of sample

The bulk sample obtained by one of the procedures described above (4.2.3.2 or 4.2.3.3) shall be divided into 3 equal samples. Place in three clean bottles, label and tightly stopper. At least one bottle shall be kept for future reference for one year or until the use-by date, whichever is the shorter period.

Store the bottle(s) in a place that is protected from heat, frost and light.

4.3 Sampling at delivery

When sampling of a consignment of an admixture is required, the sampling shall be carried out before unloading at the point and time of delivery. The method of sampling shall be agreed between the supplier and the customer. If there is no agreement between them, the methods described in 4.2.2 and 4.2.3 shall apply.

4.4 Record

All information relevant to the sampling shall be recorded, in particular:

- a) date of sampling;
- b) name of the product;
- c) type of admixture;
- d) name of the manufacturer;
- e) manufacturer's batch identification number;
- f) quantity of batch represented by the sample;
- g) physical state;
- h) colour;
- i) names of persons present and organizations represented during sampling.

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5 Conformity control and evaluation of conformity

5.1 General

This procedure is intended to evaluate conformity of admixtures with the relevant parts of the series EN 934.

5.2 Conformity Criteria

Composition and performance requirements and the related checks and test methods are given in the relevant parts of the series EN 934. When tested in accordance with these methods each result shall conform to the relevant requirement.

EN 934-6:2001 (E)**5.3 Initial type testing**

Initial type testing shall be carried out to prove the conformity of the admixtures to the requirements of the relevant part of the series EN 934, in the following circumstances:

- a) when a new formulation or type of admixture is produced,
- b) when there is a change in the formulation which may have significant effect on the performance of the admixturer,
- c) when there is a change in the raw materials which may have significant effect on the performance of the admixturer.

Initial type testing shall include all tests relevant for a specific type of admixture.

5.4 Factory production control**5.4.1 General**

The manufacturer shall operate production control at each factory where admixtures are produced. A system of production control is based on the following:

- production control supervisor (5.4.2)
- production control manuals (5.4.3)
- production control programme (5.4.4)
- production control records (5.4.5)

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5.4.2 Production control supervisor

The appointed production control supervisor shall be directly in charge of the factory production control and of the manufacturing process. In accordance with the production control manual the supervisor shall ensure that:

- a) the required control laboratory facilities and equipment are maintained and in calibration;
- b) the required records are drawn up and retained (see 5.4.5);
- c) the marking and labelling of the product ready for dispatch meets the requirements of this standard;
- d) instructions for the manufacturing process and production control are available in writing;
- e) the production control personnel have been trained in controlling the manufacturing process and in checking that manufacturing instructions are being followed;
- f) the procedures for controlling the production are being carried out;
- g) only admixtures which fulfill the requirements of the relevant parts of the series EN 934 are labelled as complying.

5.4.3 Production control manuals

Production control manuals specifying objectives and procedures relating to the attainment of the required quality of the products shall be prepared and maintained. In particular they shall contain:

- a) requirements relating to the acceptance of the raw materials and instructions with regard to their sampling, verification, identification codes and traceability and the storage and expiry dates;
- b) procedure for calibration and servicing of laboratory equipment and facilities;

- c) manufacturing instructions for the production process, including the sampling;
- d) tests to be carried out on samples of the admixtures with target values and limits of acceptance;
- e) action to be taken in case of non compliance of the product;
- f) instructions for storage, labelling and delivery of the admixtures.

5.4.4 Production control programme

5.4.4.1 General

Production control shall consist of:

- control of raw materials (5.4.4.2)
- control of the production process (5.4.4.3)
- control of the finished product (5.4.5)

5.4.4.2 Control of raw materials

The production control supervisor shall ensure that the raw materials used are within the specifications in the production control manual.

5.4.4.3 Control of the production process

The production control supervisor shall ensure that the checks for controlling the production laid down in the production control manual are carried out.

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5.4.4.4 Control of the finished product

The production control supervisor shall ensure that:

- a) testing of the finished product is carried out at not less than the frequency shown in
 - for concrete admixtures in EN 934-2:2001,
 - for admixtures for masonry mortar in prEN 934-3:1998,
 - for admixtures for grout for prestressing tendons in EN 934-4:2001,
 - for admixtures for sprayed concrete in prEN 934-5:1998.

and in accordance with the procedure in the production control manual;

- b) tests on the finished product are carried out on a representative sample taken from a batch according to 4.2;
- c) results of the tests are recorded in the production control records as specified under 5.4.5.

5.4.5 Production control records

The following details shall be recorded clearly and in chronological order:

- a) results of checks on laboratory testing equipment including calibration reports;