



SLOVENSKI STANDARD
SIST EN 12659:2000
01-november-2000

Svinec in svinčeve zlitine - Svinec

Lead and lead alloys - Lead

Blei und Bleilegierungen - Blei

Plomb et alliages de plomb - Plomb

Ta slovenski standard je istoveten z: EN 12659:1999

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ICS:

77.120.60	Svinec, cink, kositer in njihove zlitine	Lead, zinc, tin and their alloys
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en

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EUROPEAN STANDARD

EN 12659

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 1999

ICS 77.120.60

English version

Lead and lead alloys - Lead

Plomb et alliages de plomb - Plomb

Blei und Bleilegerungen - Blei

This European Standard was approved by CEN on 19 August 1999.

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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, 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
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 306 "Lead and lead alloys", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2000, and conflicting national standards shall be withdrawn at the latest by March 2000.

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.

Within its programme of work, Technical Committee CEN/TC 306 requested CEN/TC 306/WG 1 "Lead" to prepare the following standard :

EN 12659, *Lead and lead alloys – Lead*.

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1 Scope

This European Standard specifies the designation, chemical composition, sampling and analysis, marking and labelling and other requirements for lead.

2 Normative references

This European Standard incorporates, by dated or undated references, 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 12402, *Lead and lead alloys - Methods of sampling for analysis*.

ISO 11014-1, *Safety data sheet for chemical products - Part 1 : Content and order of sections*.

NOTE For the chemical analysis, prestandards in preparation by CEN/TC 306/WG 3, see bibliography.

3 Terms and definitions

For the purposes of this European Standard, the following definitions apply:

3.1

cast

product of one furnace or crucible melt

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NOTE All the ingots from the single cast have the same identifying mark

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3.2

ingot

cast product intended for remelting and/or processing

3.3

jumbo

very large ingot with a mass generally much more than 50 kg

3.4

bundle

collection of ingots taken from a single cast and secured if necessary, for the purposes of handling, shipment and storage.

4 Designation

4.1 Material number

The material is designated by number (see table 1). This material number designation is in accordance with the system given in annex A (normative).

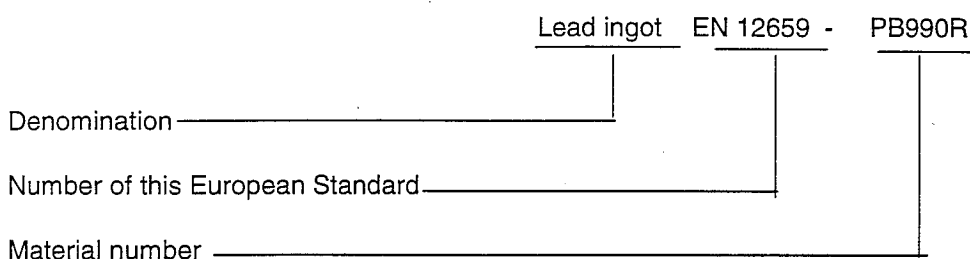
4.2 Product

The product designation for products to this standard shall consist of :

- denomination (Lead ingot or Lead jumbo) ;
- number of this European Standard (EN 12659) ;
- material number (see 4.1).

The derivation of a product designation is shown in the following example.

EXAMPLE



5 Ordering information

In order to facilitate the enquiry, order and confirmation of order procedures between the purchaser and the supplier, the purchaser shall state on his enquiry and/his order the following information :

- a) quantity of product required (mass) ;
- b) product designation (see 4.2) ;
- c) nominal mass of an ingot (in kilograms) and of a jumbo or a bundle (in tonnes).

In addition, the purchaser shall also state on the enquiry and the order if any of the following is required :

- d) colour coding [see 9.1 d)] ;
- e) certificate of analysis (see 8.2), and/or declaration of conformity (see 8.3).

EXAMPLE

Ordering details for 100 t lead ingots conforming to EN 12659, in material number PB990R, nominal ingot mass 50 kg, nominal mass of a bundle 1 t, with colour coding blue :

100 t Lead ingot EN 12659 - PB990R
 - nominal ingot mass 50 kg
 - nominal bundle mass 1 t
 - colour coding blue

6 Requirements

6.1 Chemical composition

The composition of the lead shall conform to the requirements given in table 1.

6.2 Shape and size

The shape and size of ingots and jumbos shall be at the discretion of the supplier, unless otherwise agreed between the purchaser and the supplier.

6.3 Surface condition

The surface condition of the ingots and jumbos shall be such that it does not affect the composition and is not detrimental to the use of the ingots.

7 Sampling and analysis

7.1 Sampling

Sampling shall be carried out in accordance with EN 12402.

7.2 Analysis

When analysis is carried out by the supplier to verify conformity of a cast, the analytical methods used shall be at his discretion.

NOTE When optical emission spectrometry is used, the method should conform to ENV 12908.

In case of dispute concerning the results of analysis, the relevant methods of analysis of the prENVs in preparation (see bibliography) to be used to control the compositional conformity of a consignment, apply.

NOTE Due to the nature of samples prepared, only chemical analyses are feasible.

7.3 Rounding of the results of analysis

The values obtained shall be rounded to the same number of decimal places as used to express the specified limit in table 1.

The following rules shall be used for rounding :

- a) if the figure immediately after the last figure to be retained is less than 5, the last figure to be retained shall be kept unchanged ;
- b) if the figure immediately after the last figure to be retained is equal to or greater than 5, the last figure to be retained shall be increased by one.

8 Documentation

8.1 General

The supplier shall provide with each consignment the following minimum documentation, including a certificate of analysis in accordance with 8.2 and/or, if requested by the purchaser, a declaration of conformity in accordance with 8.3 :

- a) name and address ;
- b) material number ;
- c) mass of supplied product ;
- d) certificate of analysis (see 8.2).

Other information can also be included, if agreed between the purchaser and the supplier.

8.2 Certificate of analysis

This is a document which certifies the chemical composition of each cast.

The chemical composition shall be reported as the average of the results obtained on the samples taken during moulding unless otherwise agreed between purchaser and supplier.

Other information can also be included, if agreed between the purchaser and the supplier.

8.3 Declaration of conformity (standards.iteh.ai)

If a declaration of conformity is required, the content shall be agreed between the purchaser and the supplier.

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9 Marking and labelling

9.1 Marking

Each ingot shall be clearly and permanently marked with the following minimum information :

- a) name or identification mark of the manufacturer (usually cast into the product) ;
- b) cast identity.

In addition, if agreed between the supplier and the purchaser :

- c) material number or short designation (see table 1) ;
- d) any additional marking (for example, purchaser, colour coding....).

9.2 Labelling

If required, labelling shall be agreed between the purchaser and the supplier.

10 Safety

Any risks involved in handling and use of lead are detailed in the supplier's safety data sheet. This data sheet shall conform to ISO 11014-1.