



SLOVENSKI STANDARD

SIST EN 13283:2004

01-januar-2004

Cink in cinkove zlitine – Sekundarni cink

Zinc and zinc alloys - Secondary zinc

Zink und Zinklegierungen - Sekundärzink

Zinc et alliages de zinc - Zinc secondaire

Ta slovenski standard je istoveten z: **EN 13283:2002**

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ICS:

77.120.60	Svinec, cink, kositer in njihove zlitine	Lead, zinc, tin and their alloys
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13283

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English version

Zinc and zinc alloys - Secondary zinc

Zinc et alliages de zinc - Zinc secondaire

Zink und Zinklegierungen - Sekundärzink

This European Standard was approved by CEN on 1 August 2002.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 13283:2002) has been prepared by Technical Committee CEN/TC 209 "Zinc and zinc 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of an identical text or by endorsement, at the latest by April 2003, and conflicting national standards shall be withdrawn at the latest by April 2003.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

This standard was prepared to provide galvanizing plants and other users of zinc with standardized zinc qualities which are not manufactured according to the primary zinc process. The chemical composition of these grades is specifically oriented by these requirements for use and takes account of the possibilities resulting from the increasing amount of secondary zinc materials for controlled recycling, to preserve natural resources.

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1 Scope

This European Standard specifies designations, chemical compositions, marking and other requirements for secondary zinc. These grades are mainly used for hot dip-galvanizing purposes according to EN ISO 1461 and for the production of brass.

Secondary zinc can be produced by different processes which are distinguished by the material source. The main part is recycled from used zinc material and scrap, such as zinc sheet; also secondary zinc can be produced from zinc process residues, such as zinc ashes.

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 12060, *Zinc and zinc alloys — Method of sampling — Specifications.*

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3 Terms and definitions

For the purposes of this European standard, the following terms and definitions apply:

3.1

ingot (bar)

cast product intended for remelting

3.2

jumbo

large ingot weighing at least 30 kg. Normally, a jumbo weighs several hundred kilograms

3.3

bundle (pack)

combination of ingots from one batch (see 3.6) packed for the purposes of handling, shipment and storage, for example by banding

3.4

secondary zinc

zinc produced by controlled remelting of secondary materials containing metallic zinc

3.5

cast

product of one furnace or crucible melt

3.6

batch

number of ingots taken from one single cast

4 Manufacture

Ingots (bars) or jumbos shall be manufactured by casting liquid secondary zinc in moulds.

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5 Ordering information

In order to facilitate procedures of enquiries, orders and confirmations of order between the purchaser and the supplier, the orderer shall supply the following information in the enquiry and order:

- the number of this European Standard (EN 13283);
- the grade designation of the required zinc grade (see Table 1);
- the total nominal mass required and the nominal mass per piece, if necessary;
- if necessary, whether a specific ingot shape is required (see 6.2);
- whether a certificate of analysis or a declaration of conformity is required (see clause 9).

6 Requirements

6.1 Chemical composition

The chemical composition of ingots or jumbos shall conform to the requirements given for the appropriate grade in Table 1.

When evaluating the results of the analysis, the values obtained shall be rounded to the same number of decimal places as used in expressing the specified limits in Table 1.

The following rules shall be used for rounding:

- 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;
- 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.

NOTE In cases of complaints, the method of analysis given in EN 12019 should be applied.

Table 1 — Chemical composition of secondary zinc

Grade designation	Composition in % (mass fraction)								Remarks (for information only)
	Nominal zinc content	1	2	3	4	5	6	Total of elements in columns 1 to 6 max.	
		Pb max.	Cd max.	Fe max.	Al max.	Cu max.	Sn max.		
ZSA	98,5	1,3	0,02	0,05	0,05	—	— ^a	1,5	Grades made mainly from zinc containing process residues, such as skimmings
ZS1	98,0	1,3	0,04	0,05	0,1	—	0,7 ^a	2,0 ^b 1,5	Grade made mainly by recycling of scrap and used zinc products
ZS2	97,5	1,5	0,05	0,12	—	—	0,7 ^a	2,5 ^b 2,0	

^a When these grades are used for the manufacture of copper-zinc alloys, the Sn content may be limited to 0,3 %.

^b When these grades are used for galvanizing, it should be noted that EN ISO 1461 requires that the zinc bath contains not more than 1,5 % of impurities other than Fe and Sn, and that the total of metals other than zinc (including Fe and Sn) is less than 2 %.

6.2 Shape of ingots

The shape of ingots shall be at the discretion of the supplier, unless a specific shape is agreed between the purchaser and the supplier in the order [see 5 d)].

6.3 Surface condition of ingots and jumbos

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

7 Sampling

The sampling of secondary zinc for verification of its conformity to the chemical composition requirements shall be in accordance with EN 12060.

8 Marking and labelling

Each ingot, jumbo or bundle shall be marked or labelled with at least the following information:

- a) the name or trademark of the manufacturer;
- b) the zinc grade (see Table 1);
- c) the number of the batch or cast;
- d) the mass of the ingot, jumbo or bundle (pack).

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9 Inspection documents

If requested by the purchaser at the time of ordering, the supplier shall furnish inspection documents for each consignment. The documentation shall be as chosen by the purchaser [see 5 e)] and shall be in accordance with method a) or b) as described below:

- a) a certificate of analysis, giving the results obtained on the specific cast(s), in the consignment;
- b) a declaration of conformity of the consignment with the order requirements. This declaration shall include the following information:
 - 1) name and address of the supplier;
 - 2) date of declaration of conformity;
 - 3) name and address of the purchaser;
 - 4) purchaser's order number;
 - 5) a description of the goods and the quantity supplied;
 - 6) identification of this standard and the grade designation supplied;
 - 7) the following declaration:

"The goods detailed hereon have been manufactured to conform to requirements of the purchaser and specification detailed thereon".

Signed

(Supplier's authorized representative)