



SLOVENSKI STANDARD

SIST EN 611-2:1998

01-november-1998

Kositer in kositrove zlitine - Kositer-antimonove zlitine - 2. del: Izdelki

Tin and tin alloys - Pewter and pewterware - Part 2: Pewterware

Zinn und Zinnlegierungen - Zinnlegierungen und Zinngerät - Teil 2: Zinngerät

Étain et alliages d'étain - Étain pour la fabrication d'objets en étain et objets en étain -
Partie 2: Objets en étain

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Ta slovenski standard je istoveten z: EN 611-2:1996

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ICS:

77.150.60 Svinčeni, cinkovi in kositrovi Lead, zinc and tin products
izdelki

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en

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EUROPEAN STANDARD

EN 611-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 1996

ICS 77.120.60; 77.140.90

Descriptors: metal products, tin, tin alloys, specifications, manufacturing, brazed- and soldered joints, sampling, chemical analysis, components, chemical composition, food-container contact, marking

English version

Tin and tin alloys - Pewter and pewterware - Part 2: Pewterware

Étain et alliages d'étain - Étain pour la
fabrication d'objets en étain et objets en
étain - Partie 2: Objets en étain

Zinn und Zinnlegierungen - Zinnlegierungen und
Zinngerät - Teil 2: Zinngerät

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This European Standard was approved by CEN on 1996-04-12. 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 Central Secretariat or to any CEN member.

The European Standards exist 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

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 220 “Tin and tin alloys”, the secretariat of which is held by BSI.

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 November 1996, and conflicting standards shall be withdrawn at the latest by November 1996.

This standard consists of two parts of which Part 2 specified the requirements for pewterware.

Part 1 gives the requirements for the pewter alloys for use in the production of the pewterware in Part 2.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This Part of EN 611 specifies the requirements for the fabrication, sampling, analysis and marking of pewterware. It does not cover articles manufactured from materials other than pewter which have been coated or clad with pewter.

NOTE: The requirements for pewter alloys are specified in EN 611-1.

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 Part of EN 611 only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 610	Tin and tin alloys - Ingot tin
EN 611-1 :1995	Tin and tin alloys - Pewter and pewterware - Part 1: Pewter
EN 29453	Soft solder alloys - Chemical compositions and forms (ISO 9453:1990)

3 Materials of manufacture

3.1 Pewterware

The pewter part (s) of the pewterware can be fabricated from one or more pieces of pewter, each of which shall be an alloy conforming to EN 611-1.

Materials used to simulate pewter alloys in the article, such as lead, zinc, aluminium or their alloys, shall not be used. Materials which do not simulate pewter alloys may be associated with the pewter in the article of pewterware for functional, decorative and/or structural purposes.

NOTE: The finished pewterware may be surface treated, for example, by painting or by patination.

3.2 Soldered joints

For those cases where the soldered joint can reasonably be expected to come into contact with foodstuffs, the solder used for joining the component parts of the pewterware shall contain not more than 0,25 % lead and 0,05 % cadmium. Examples of solders which meet this requirement are as follows:

- a) one of the alloys numbered 1 to 6 in table 1 of EN 611-1:1995; or
- b) alloy 21 in EN 29453 (see table A.1); or
- c) tin complying with any of the grades specified in EN 610.

NOTE: It is recommended that soldered joints which can reasonably be expected not to come into contact with foodstuffs should be made using solder which complies either with a), b) or c) of this sub-clause, or with alloy 11 or alloy 12 in EN 29453 (see table A.1).

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4 Requirements

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4.1 Pewterware

When sampled and analyzed in accordance with a) of clause 5, the composition of each piece of pewter in the pewterware article (see 3.1) shall be found to conform to one of the alloys in EN 611-1.

4.2 Soldered joints for contact with foodstuffs

When sampled and analyzed in accordance with b) of clause 5, the composition of the joint region of those joints which may reasonably be expected to come into contact with foodstuffs shall contain not more than 0,25 % lead (Pb) and 0,05 % cadmium (Cd).

5 Sampling and analysis

When analysis is required to be carried out to verify compliance of the pewterware article with this standard, the procedures given in a) and b) of this clause, shall be followed.

a) Sampling and analysis of the pewter component (s) of the pewterware article

All surface coatings on the pewter components to be sampled shall be removed before sampling. Analysis samples shall be taken, by drilling or cutting, to represent each pewter component part of the article. These samples shall be taken from zones furthest from any soldered joints.

For routine control purposes each of the analysis samples so obtained shall be analyzed by the use of recognized chemical, or instrumental, analytical procedures.

In cases of dispute concerning the chemical composition of the pewterware, until the publication of European Standards¹⁾ for the analysis of pewter, the methods of analysis to be used shall be subject to agreement between the disputing parties and any independent arbitrator.

b) Sampling and analysis of soldered joints

The joint shall be cut from the pewterware article. The sample for analysis shall be a length of the joint, taken so as to include not more than 2 mm of the pewter on each side of the joint. The mass of the sample taken for analysis shall be at least 0,1 g.

Analysis shall be carried out on this sample to determine the lead and cadmium content (see 4.2).

NOTE: It is not normally possible to determine the actual composition of the solder used for the joint in the article. However, if one of the solders specified in 3.2 for joints in contact with foodstuffs has been used, then the composition of the sample of the joint will be found to contain less than 0,25 % Pb and 0,05 % Cd.

¹⁾ In course of preparation

6 Marking

As a minimum requirement, each article of pewterware shall be permanently marked with:

- the name or mark of the producer and/or distributor; and
- the word PEWTER (or corresponding translation for instance "ETAIN" in French, "Zinn" in German, etc.

In addition the pewterware article, or if this is not practicable, its label or associated packaging, shall be marked with the number of this part of this European Standard (i.e. EN 611-2).

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