



SLOVENSKI STANDARD

SIST EN 570:1998

01-april-1998

**Aluminij in aluminijeve zlitine - Gneteni polizdelki za udarno iztiskovanje -
brizganje (okrogli - rondele z luknjo ter brez nje - in kvadrasti) - Specifikacije**

Aluminium and aluminium alloys - Impact extrusion slugs obtained from wrought
products - Specifications

Aluminium und Aluminiumlegierungen - Butzen zum Fließpressen aus Halbzeug
hergestellt - Spezifikationen

Aluminium et alliages d'aluminium - Pions de filage par choc obtenus a partir de produits
corroyés - Spécifications

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Ta slovenski standard je istoveten z: EN 570:1994

ICS:

77.150.10 Aluminijski izdelki Aluminium products

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EUROPEAN STANDARD

EN 570

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 1994

UDC 669.71-412:669.715.018.26-412:621.777.4:620.1

Descriptors: wrought product, aluminium, aluminium alloy, slug, designation, dimension, dimensional tolerance, form tolerance, chemical composition, mechanical property, surface condition, quality

English version

**Aluminium and aluminium alloys - Impact
extrusion slugs obtained from wrought products -
Specifications**

Aluminium et alliages d'aluminium - Pions de
filage par choc obtenus à partir de produits
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This European Standard was approved by CEN on 1994-08-18. 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 drawn up by CEN/TC 132 "Aluminium and aluminium alloys" whose Secretariat is held by the Association Française de Normalisation (AFNOR).

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 11 "Slugs for impact extrusion" to prepare the following standard:

EN 570 Aluminium and aluminium alloys - Impact extrusion slugs obtained from wrought products - Specifications

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 February 1995, and conflicting national standards shall be withdrawn at the latest by February 1995.

According to the CEN/CENELEC Internal Regulations, 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, United Kingdom.

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1 Scope

This European Standard specifies the technical conditions for inspection and delivery, tolerances on dimensions and form and other requirements for flat or preformed aluminium and aluminium alloy slugs for impact extrusion.

It applies to slugs produced either by punching of rolled products or by cutting of extruded products.

This standard does not apply to slugs produced from unwrought cast ingots.

Slugs covered in this standard are suitable for the manufacture of impact extruded parts for packaging and industrial applications.

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 573-3 Aluminium and aluminium alloys - Chemical composition and form of wrought products - Part 3: Chemical composition

EN 754-5 Aluminium and aluminium alloys - Cold drawn rod/bar and tube - Part 5: Rectangular bars, tolerances on dimensions and form ¹⁾

EN 755-5 Aluminium and aluminium alloys - Extruded rod/bar, tube and profile - Part 5: Rectangular bars, tolerances on dimensions and form ¹⁾

EN 10204 Metallic products - Types of inspection documents

ISO 6506 Metallic materials - Hardness test - Brinell test

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3 Definitions

For the purposes of this standard the following definitions apply:

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3.1 slug: A piece of metal of uniform thickness of regular or irregular shape taken from a wrought product, usually for impact extrusion. Slugs are supplied with or without a centre hole.

3.2 thickness: In slugs punched from rolled products, the thickness is measured perpendicular to the rolling plane, whilst in slugs cut from extruded products thickness is measured in the extrusion direction.

4 Orders or tenders

4.1 General

The selection of material and of the condition of supply is at the customer's discretion. It is recommended that, when ordering, the intended use and any further processing envisaged be stated.

If preformed slugs are required, the type of preforming shall be given when ordering, together with a drawing specifying the details. In addition, details on shape and size shall be given in the designation; see 4.2.

¹⁾ Under preparation

4.2 Designation

4.2.1 Standard designation

The standard designation shall be given in the following order:

- the description of product (slug);
- the number of this European Standard;
- the slug shape, e.g. flat, round with or without hole, rectangular, preformed;
- dimensions in millimetres;
- the designation of the aluminium or aluminium alloy, see 5.2;
- the surface finish, see 5.4.1.

4.2.2 Examples of standard designation

4.2.2.1 Round slug without a centre hole (see figure 1)

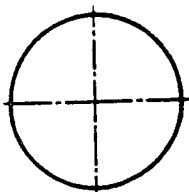


Figure 1

Description of product, EN number, slug shape: round (rd), diameter x thickness, material designation, e.g.

Slug EN 570 - rd 24,8 x 4,2 - EN AW-1050A

or Slug EN 570 - rd 24,8 x 4,2 - EN AW-A1 99,5

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4.2.2.2 Round slug with a centre hole (see figure 2)

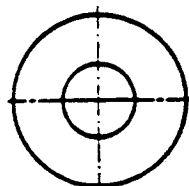


Figure 2

Description of product, EN number, slug shape: round (rd), diameter x thickness x hole diameter (ch), material designation, e.g.

Slug EN 570 - rd 24,8 x 4,2 x 8ch - EN AW-1050A
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or Slug EN 570 - rd 24,8 x 4,2 x 8ch - EN AW-A1 99,5

4.2.2.3 Rectangular slug (see figure 3)



Figure 3

Description of product, EN number, slug shape: rectangular (rect), length x width x thickness, corner radius (R), e.g. R1 if 1 mm, material designation, e.g.

Slug EN 570 - rect 51 x 26,5 x 6,1 x R1 - EN AW-1050A

or Slug EN 570 - rect 51 x 26,5 x 6,1 x R1 - EN AW-A1 99,5

4.2.3 Designation in order

When ordering, the standard designation shall be supplemented by stating as applicable, the mass (preceding the standard designation), the slug shape (flat or preformed), and the surface finish (as specified in 5.4.1), e.g.

EXAMPLE: 4 t of round flat slugs without a centre hole with bright surface finish:

4 t Slug EN 570 - flat, bright, rd 29,8 x 4 - EN AW-1050A

or 4 t Slug EN 570 - flat, bright, rd 29,8 x 4 - EN AW-A1 99,5

5 Requirements

5.1 Tolerances on dimensions and form

5.1.1 General

The requirements for tolerances on dimensions and form for slugs manufactured in a flat or preformed shape are specified in 5.1.2 to 5.1.6.

The tolerances specified in tables 1 to 7 shall apply for slugs after punching or cutting in the bright condition.

Slugs with a roughened surface shall be assumed to have an average increase in dimensions of 0,05 mm.

The increase in dimensions depends on the material used and the mass of the slug. Particular tolerances for slugs with a roughened surface shall be agreed between supplier and customer.

The limits of size in the manufacture of punched slugs shall be as follows:

- In the case of round slugs, the thickness shall not exceed the diameter.
- In the case of rectangular slugs, the thickness shall not exceed the width.
- In the case of slugs with a centre hole, the slug thickness shall not exceed the hole diameter.

If these limits are exceeded, slugs shall be manufactured by cutting.

5.1.2 Slug diameter

The tolerances specified in table 1 for punched round slugs and table 2 for sawn slugs shall apply.

Table 1: Tolerances on diameter of punched slugs
Dimensions in millimetres

Slug diameter		Tolerances ¹⁾
over	up to	
10	40	$\pm 0,02$
40	60	$\pm 0,03$
60	80	$\pm 0,04$
80	120	$\pm 0,05$
120	150	$\pm 0,06$
150	200	$\pm 0,08$

¹⁾ The tolerances include the circularity tolerance.

Table 2: Tolerances on diameter of sawn slugs

Dimensions in millimetres

Slug diameter		Tolerances ¹⁾
over	up to	
> 3	6	0 - 0,07
6	10	0 - 0,09
10	18	0 - 0,11
18	30	0 - 0,13
30	50	0 - 0,16
50	65	0 - 0,5
65	80	0 - 0,6
80	130	0 - 0,9

¹⁾ The tolerances include the circularity tolerance.

5.1.3 Hole diameter of punched slugs

The tolerances specified in table 3 shall apply only for flat slugs with a hole, with the hole diameter not exceeding 40 % of the slug diameter and the slug thickness not exceeding two thirds of the hole diameter.

In all other cases, the tolerances of the hole diameter shall be agreed between supplier and customer.

Table 3: Tolerances on hole diameter of punched slugs

Dimensions in millimetres

Hole diameter		Tolerances
over	up to	
-	10	± 0,05
10	20	± 0,07
20	-	± 0,1