



# SLOVENSKI STANDARD

## SIST EN 941:1998

01-april-1998

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### Aluminij in aluminijeve zlitine - Rondele in polizdelki za splošno uporabo - Specifikacije

Aluminium and aluminium alloys - Circle and circle stock for general application -  
Specifications

Aluminium und Aluminiumlegierungen - Ronden und Rondenvormaterial für allgemeine  
Anwendungen - Spezifikationen

Aluminium et alliages d'aluminium - Disques et ébauches pour disques pour applications  
générales - Spécifications

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**Ta slovenski standard je istoveten z: EN 941:1995**

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#### **ICS:**

77.150.10      Alumijski izdelki                      Aluminium products

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EUROPEAN STANDARD

EN 941

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 1995

ICS 77.120.10; 77.140.90

Descriptors: aluminium, aluminium alloys, rolled products, blank, delivery, orders : sale documents, dimensions, dimensional tolerances

English version

## Aluminium and aluminium alloys - Circle and circle stock for general applications - Specifications

Aluminium et alliages d'aluminium - Disques et ébauches pour disques pour applications générales - Spécifications

Aluminium und Aluminiumlegierungen - Ronden und Rondenvormaterial für allgemeine Anwendungen - Spezifikationen

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# CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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• 1995

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**Foreword**

This European Standard has been prepared by the Technical Committee CEN/TC 132 "Aluminium and aluminium alloys" of which the secretariat 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of an identical text or by endorsement, at the latest by December 1995, and conflicting national standards shall be withdrawn at the latest by December 1995.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 standard specifies the particular requirements for wrought aluminium and aluminium alloys in the form of circle or circle stock for general applications.

It applies to :

- circles made out of hot or cold-rolled circle stock by :
  - blanking : thickness 0,2 mm up to and including 12 mm and with a diameter up to 1 000 mm ;
  - sawing or shearing : thickness 0,2 mm up to and including 200 mm with a diameter up to 3 500 mm ;
- hot or cold-rolled circle stock with a thickness from 0,2 mm up to and including 200 mm and with a width up to 3 500 mm.

It does not apply to slugs for impact extrusions or to circle and circle stock for culinary utensil applications which are dealt with in separate European standards.

## 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 485-1	Aluminium and aluminium alloys - Wrought products - Sheets, strips and plates - Part 1 : Technical conditions for inspection and delivery
EN 485-2	Aluminium and aluminium alloys - Sheet, strip and plate - Part 2 : Mechanical properties
EN 485-3:1993	Aluminium and aluminium alloys - Sheets, strip and plate - Part 3 : Tolerances on dimensions and form for hot-rolled products
EN 485-4:1993	Aluminium and aluminium alloys - Sheet, strip and plate - Part 4 : Tolerances on dimensions and form for cold-rolled products
EN 515	Aluminium and aluminium alloys - Wrought products - Temper designations

## 3 Definitions

For the purposes of this standard all definitions of EN 485-1 apply with the following additions :

### 3.1 circle

Circular flat product obtained by circular sawing or shearing, or by blanking of a flat rolled product with a uniform thickness over 0,20 mm.

### 3.2 circle stock

Flat rolled product of rectangular cross-section with uniform thickness over 0,20 mm, supplied in coils, sheets or plates, usually with sheared or sawn edges, and intended to be sawn, sheared or blanked into flat shapes to be subsequently formed, drawn, etc.

NOTE : The thickness does not exceed one-tenth of the width.

### 3.3 hot-rolled circle and circle stock

Circle or circle stock whose final thickness is obtained by hot rolling.

### 3.4 cold-rolled circle and circle stock

Circle or circle stock whose final thickness is obtained by cold rolling.

## 4 Technical conditions for inspection and delivery

### 4.1 General

All provisions of EN 485-1 shall apply, except for clause 4 (orders or tenders) which is modified as follows.

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### 4.2 Orders or tenders

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The order or tender shall define the product required and shall contain the following information :

a) the form and type of product :

- the form of the product (circle or circle stock) ;
- the designation of the aluminium or aluminium alloy ;
- the customer application ;

b) the metallurgical temper of the material for delivery according to EN 515 (degree of hardness or heat treatment condition) and, if different, the metallurgical temper for use ;

c) the number of this European Standard or a specification number, or, where none exists, the properties agreed between purchaser and supplier ;

d) the dimensions and shape of the product as applicable :

- thickness ;
- diameter of the circle ;
- width of the strip, sheet or plate ;
- length of the sheet or plate ;

- internal and external diameters of the coil ;
- e) whether hot-rolled or cold-rolled tolerances apply ;
- f) quantity :
  - mass or number of pieces ;
  - tolerances on quantity if required ;
- g) any requirements for certificates of conformity, test and/or analysis reports or inspection certificates ;
- h) any special requirements agreed between purchaser and supplier :
  - marking of products ;
  - references to drawings, etc..

## 5 Mechanical properties

The mechanical properties shall conform to the requirements specified in EN 485-2.

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## 6 Tolerances on dimensions and form

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### 6.1 General <https://standards.iteh.ai/catalog/standards/sist/88346ab6-5c6c-4e89-9be2a-13bf4053873c/sist-en-941-1998>

All provisions of EN485-3 and EN 485-4 shall apply,with the following amendments and additions :

### 6.2 Diameter

Tolerances on diameter for circle shall conform to table 1. These tolerances include the tolerance on roundness.

NOTE : For circles obtained by blanking the recommended standard diameters are :

- from 100 mm up to 500 mm nominal diameter : every multiple of 5;
- over 500 mm up to 1 000 mm nominal diameter : every multiple of 10.

### 6.3 Thickness

Tolerances on thickness for hot-rolled circle and circle stock shall conform to table 2. They are identical to those specified in table 1 of EN485-3:1993 and are reproduced here for convenience.

The tolerances on thickness for cold-rolled circle and circle stock shall conform to table 3. They are identical to those specified in table 1 of EN 485-4:1993 and are reproduced here for convenience. The partition into group I and group II of most common materials which may be used for the present application shall be as shown in table 4.



#### 6.4 Tolerances on flatness for circles

Tolerances on flatness, expressed as a percentage of the diameter  $D$  and  $l$  or the measured chord length  $L$ , shall conform to table 5.

Deviation from flatness  $d$ , resulting from arching or buckling, is measured as shown in figure 1 and 2, using a lightweight straightedge and a feeler gauge, dial gauge or scale, while the circle is resting on a horizontal base plate, concave side upwards.

Two measurements shall be carried out with the straight edge respectively parallel and perpendicular to the rolling direction.

These tolerances do not apply to circles supplied in the O or F tempers except for special agreement between supplier and purchaser.

Table 1 : Tolerances on diameter

Dimensions in millimetres

Specified thickness		Method of production	Diameter tolerance <sup>1)</sup> for specified diameter				
over	up to		up to 600	over 600 up to 1 000	over 1 000 up to 1 600	over 1 600 up to 3 000	over 3 000 up to 3 500
0,2	4,0	Blanking	± 0,5	± 0,5	-	-	-
		Circular sawing or shearing	+ 3 0	+ 4 0	+ 7 0	+ 9 0	+ 11 0
4,0	6,0	Blanking	± 0,7	± 0,7	-	-	-
		Circular sawing or shearing	+ 4 0	+ 5 0	+ 8 0	+ 9 0	+ 11 0
6,0	12,0	Blanking	± 1	± 1	-	-	-
		Circular sawing or shearing	+ 4 0	+ 5 0	+ 8 0	+ 10 0	+ 12 0
12,0	50	Circular sawing	+ 7 0	+ 7 0	+ 9 0	+ 12 0	+ 14 0
50	200	Circular sawing	+ 10 0	+ 10 0	+ 12 0	+ 14 0	+ 16 0

1) These tolerances include the tolerances on roundness