

**SLOVENSKI STANDARD****SIST EN 2912:2001****01-januar-2001**

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**Aerospace series - Washers, flat, large diameter, in aluminium alloy, anodized or chromated**

Aerospace series - Washers, flat, large diameter, in aluminium alloy, anodized or chromated

Luft- und Raumfahrt - Scheiben, flach, großer Außendurchmesser, aus Aluminiumlegierung, anodisiert oder chromatiert

**STANDARD PREVIEW**

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Série aérospatiale - Rondelles plates larges, en alliage d'aluminium, anodisées ou chromatées

[SIST EN 2912:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/43cde984-c2c2-440e-9355-8f2b6fbcd06/sist-en-2912-2001>

**Ta slovenski standard je istoveten z: EN 2912:1996**

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**ICS:**

49.025.20	Aluminij	Aluminium
49.030.50	Podložke in drugi blokirni elementi	Washers and other locking elements

**SIST EN 2912:2001**

**en**

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EUROPEAN STANDARD

EN 2912

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 1996

ICS 49.040.20

Descriptors: aircraft industry, washer, plain washer, aluminium alloy, chromate, surface treatment, dimension, designation

English version

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This European Standard was approved by CEN on 1995-08-31. 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

## Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively received the approval of the National Associations and the Official Services of the members countries of AECMA, prior to its presentation to CEN.

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 September 1996, and conflicting national standards shall be withdrawn at the latest by September 1996.

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 United Kingdom. 2001-09-01

2001-09-01  
SIST EN 2912:2001



## 1 Scope

This standard specifies the characteristics of flat washers, large diameter, in aluminium alloy, anodized or chromated, for maximum operating temperature 120 °C, for aerospace 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 2000	Aerospace series - Quality assurance - EN aerospace products - Approval of the quality system of manufacturers
EN 2090	Aerospace series - Aluminium alloy 2024-T3 - Clad sheet and strip - $0,4 \leq a \leq 6$ mm <sup>1)</sup>
EN 2091	Aerospace series - Aluminium alloy 2024-T4 - Clad sheet and strip - $0,4 \leq a \leq 6$ mm <sup>1)</sup>
EN 2101	Aerospace series - Chromic acid anodizing of aluminium and wrought aluminium alloys
EN 2284	Aerospace series - Sulphuric acid anodizing of aluminium and wrought aluminium alloys
EN 2319	Aerospace series - Aluminium alloy 2024-T3510 - Drawn bar $a \leq 75$ mm <sup>1)</sup>
EN 2320	Aerospace series - Aluminium alloy 2024-T4 - Drawn bar $a \leq 75$ mm <sup>1)</sup>
EN 2424	Aerospace series - Marking of aerospace products
EN 2437	Aerospace series - Chromate conversion coatings (yellow) for aluminium and aluminium alloys <sup>2)</sup>

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## 3 Required characteristics

<http://catalog/standards/sist/43cde984-c2c2-440e-9355-8f2b6f6cd06/sist-en-2912-2001>

### 3.1 Configuration - Dimensions - Masses

See figure 1 and table 2. Dimensions and tolerances are expressed in millimetres and apply after surface treatment.

### 3.2 Materials

EN 2090, EN 2091, EN 2319 or EN 2320

### 3.3 Surface treatment

See table 1.

Table 1

Nature	Code
EN 2284B	A
EN 2437A1	B
EN 2101B <sup>1)</sup>	None
1) Specified in the AECMA Prestandard. Shall be replaced by EN 2284B.	

1) Published as AECMA Standard at the date of publication of this standard  
2) In preparation at the date of publication of this standard

6,3 ✓ [ 3,2 ✓ ] Values in micrometres apply prior to surface treatment.

Remove sharp edges 0,1 to 0,2

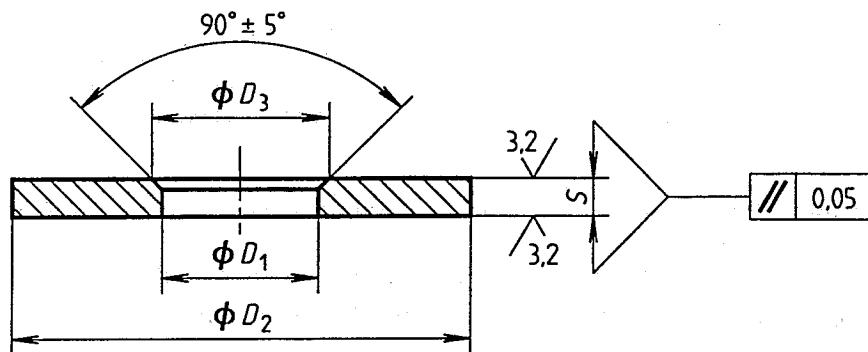


Figure 1  
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Table 2

Diameter code	$D_1$ H13	$D_2$ h14	$D_3$ nom.	SIST EN 2912:2001 <a href="https://standards.iteh.ai/catalog/standard/jst/43cdc984-c2c2-440e-9355-8f2b6f0ed76/sist_en_2912_2001">https://standards.iteh.ai/catalog/standard/jst/43cdc984-c2c2-440e-9355-8f2b6f0ed76/sist_en_2912_2001</a>	Tol.	$S$	Thickness code	$\pm 10\% \text{ }^1)$	Mass 2)
030	3,2	9	3,8	+ 0,1 0	+ 0,1 0	$S$	Thickness code	$\pm 10\% \text{ }^1)$	Mass 2)
							06	0,6	0,09
							10	1	0,16
							06	0,6	0,17
							10	1	0,28
050	5,2	15	6	+ 0,1 0	+ 0,2 0	$S$	Thickness code	$\pm 10\% \text{ }^1)$	Mass 2)
							10	1	0,44
							16	1,6	0,70
							12	1,2	0,76
							16	1,6	1,01
							12	1,2	1,00
060	6,2	18	7,4	+ 0,1 0	+ 0,2 0	$S$	Thickness code	$\pm 10\% \text{ }^1)$	Mass 2)
							16	1,6	1,33
							16	1,6	1,80
							25	2,5	2,80
							20	2	3,49
							25	2,5	4,37
100	10,2	30	11,6	+ 0,3 0	+ 0,3 0	$S$	Thickness code	$\pm 10\% \text{ }^1)$	Mass 2)
							20	2	5,05
120	12,2	36	13,8				25	2,5	6,30

1) Includes also the flatness tolerance.

2) Approximate values (kg/1 000 pieces), calculated on the basis of 2,85 kg/dm<sup>3</sup>, given for information purposes only

## 4 Designation

EXAMPLE :

Description block	Identity block
WASHER	EN2912-08016A
Number of this standard	
Diameter code (see table 2)	
Thickness code (see table 2)	
Surface treatment code (see table 1)	

NOTE : If necessary, the code I9005 shall be placed between the description block and the identity block.

## 5 Marking

EN 2424, style G

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## 6 Quality assurance

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EN 2000

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