



**SLOVENSKI STANDARD**  
**SIST EN 3696:2002**  
**01-januar-2002**

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**Aerospace series - Washers in heat resisting steel**

Aerospace series - Washers in heat resisting steel

Luft und Raumfahrt - Scheiben aus hochwarmfestem Stahl

Série aérospatiale - Rondelles en acier résistant a chaud

**Ta slovenski standard je istoveten z: EN 3696:2001**

[SIST EN 3696:2002](https://standards.iteh.ai/catalog/standards/sist/d4d59f52-b890-43c6-a8e8-2170d9c57455/sist-en-3696-2002)

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**ICS:**

49.030.50	Podložke in drugi blokirni elementi	Washers and other locking elements
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**SIST EN 3696:2002**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 3696**

September 2001

ICS 49.030.50

English version

## Aerospace series - Washers in heat resisting steel

This European Standard was approved by CEN on 20 January 2001.

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: 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 received the approval of the National Associations and the Official Services of the member 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 March 2002, and conflicting national standards shall be withdrawn at the latest by March 2002.

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

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## 1 Scope

This standard specifies the characteristics of washers, in heat resisting steel, 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 (including amendments).

- EN 2175 Heat resisting steel FE-PA93HT – Solution treated and precipitation treated – Sheets and strips  $a \leq 3$  mm - Aerospace series <sup>1)</sup>
- EN 2424 Aerospace series – Marking of aerospace products
- EN 2516 Aerospace series – Passivation of corrosion resistant steels and decontamination of nickel base alloys
- EN 4317 Aerospace series - Heat resisting alloy FE-PA2601 (X6NiCrTiMoV26-15) -- Non heat treated Forging stock -  $a$  or  $D \leq 200$  mm <sup>2)</sup>
- EN 4318 Aerospace series - Heat resisting alloy FE-PA2601 (X6NiCrTiMoV26-15) - Solution treated and precipitation treated - Bar and section -  $D_e \leq 100$  mm -  $R_m \geq 960$  MPa <sup>2)</sup>

## 3 Required characteristics

### 3.1 Configuration – Dimensions – Mass

According to figure 1 and table 1

### 3.2 Surface roughness

According to figure 1, unless otherwise specified in the design documentation.

### 3.3 Materials

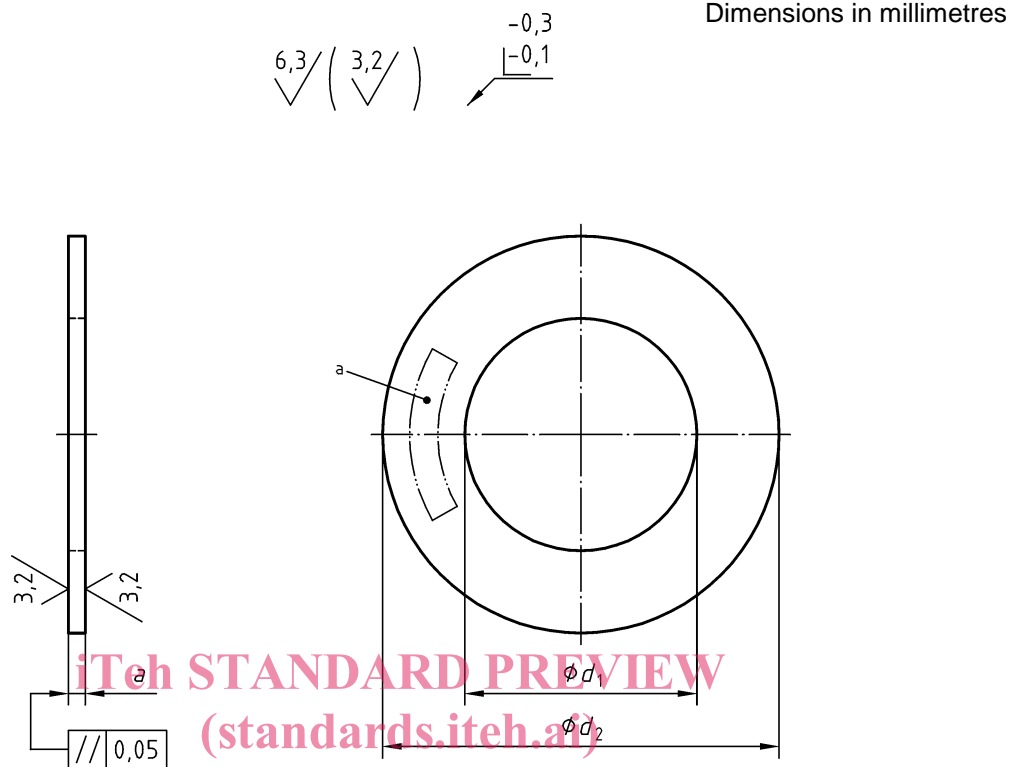
According to EN 2175, EN 4317 or EN 4318

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

2) Published as AECMA Prestandard at the date of publication of this standard

### 3.4 Surface treatment

Passivation, according to EN 2516



a Area of marking

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Figure 1

Table 1

Dimensions in millimetres

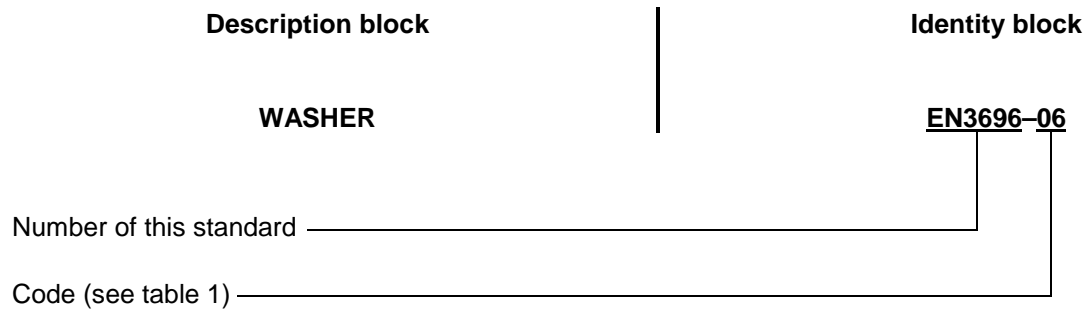
Code <sup>a</sup>	a <sup>b</sup>	$d_1$	$d_2$	Mass
		$\pm 0,25$	0 - 0,5	g/piece max.
<b>05</b>	1,0	10,5	18	1,21
<b>06</b>		12,5	21	1,62
<b>08</b>		14,5	24	2,07
<b>10</b>		16,5	28	2,91
<b>12</b>	1,5	18,5	32	5,80
<b>14</b>		20,5	35	6,84
<b>16</b>		22,5	38	7,98
<b>18</b>		24,5	42	9,89
<b>20</b>		27,5	45	10,78
<b>22</b>		30,5	50	13,36
<b>25</b>		33,5	55	16,19
<b>28</b>		36,5	58	17,28
<b>32</b>		39,5	63	20,48

<sup>a</sup> Corresponds to the pipe nominal outside diameter

<sup>b</sup> Tolerances for washers manufactured from  
 – sheet: according to dimensional standards  
 – bar:  $\pm 0,1$

## 4 Designation

EXAMPLE:



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

## 5 Marking

According to EN 2424, style A and figure 1

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## 6 Quality assurance (standards.iteh.ai)

According to EN 2000

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