

## SLOVENSKI STANDARD **SIST EN 3712:2009**

01-julij-2009

5 YfcbUj hj U! NU cj bY a UhjWYzgUa cj Ufcj UbYzYbcglfUbg Yzjn'Y `UzdfYj`Y YbY g \_UXa]^YažbUaUnUbY`n`AcG&`!`?`Ug]Zj\_UW]^U.`%/\$\$`ADU`fblf]`hYadYfUhif]`c\_c`]WY/±8&`)

Aerospace series - Nuts, anchor, self-locking, one lug, fixed, reduced series, with counterbore, in steel, cadmium plated, MoS2 lubricated - Classification: 1 100 MPa (at ambient temperature) / 235 °C

Luft-und Raumfahrt - Annietmuttern, selbstsichernd, einseitiger verkürzter Flansch, mit zylindrischer Aussenkung, aus Stahl, verkadmet, MoS2-geschmiert - Klasse: 1 100 MPa (bei Raumtemperatur) / 235 °C

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Série aérospatiale - Écrous à river à freinage interne, fixes, simple patte, série reduite, avec chambrage, en acier, cadmiés, lubrifiés MoS2 - Classification : 1 100 MPa (à température ambiante) / 235 °C

Ta slovenski standard je istoveten z: EN 3712:2007

ICS:

49.030.30 Matice Nuts

**SIST EN 3712:2009** en.de SIST EN 3712:2009

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EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

**EN 3712** 

June 2007

ICS 49.030.30

#### **English Version**

Aerospace series - Nuts, anchor, self-locking, one lug, fixed, reduced series, with counterbore, in steel, cadmium plated, MoS<sub>2</sub> lubricated - Classification: 1 100 MPa (at ambient temperature) / 235 °C

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This European Standard was approved by CEN on 20 April 2006.

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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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Iteland, Italy Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

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#### **Foreword**

This document (EN 3712:2007) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries 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 ASD, 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 December 2007, and conflicting national standards shall be withdrawn at the latest by December 2007.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. ARD PREVIEW

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### 1 Scope

This standard specifies characteristics for one lug, reduced series, counterbored, fixed anchor nuts, with a self-locking feature achieved by forming the upper portion out-of-round, in steel, cadmium plated,  $MoS_2$  lubricated, classification 1 100 MPa  $^{1}$  / 235 °C.  $^{2}$ 

#### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3191, Aerospace — Nuts, anchor, self-locking, fixed, single lug, reduced series, with counterbore, with MJ threads, classifications: 1 100 MPa (at ambient temperature)/235 °C, 1 100 MPa (at ambient temperature)/315 °C and 1 100 MPa (at ambient temperature)/425 °C — Dimensions.

ISO 5855-2, Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts.

ISO 5858, Aerospace — Nuts, self-locking, with maximum operating temperature less than or equal to  $425~^{\circ}\text{C}$  — Procurement specification.

ISO 8788, Aerospace — Nuts, metric — Tolerances of form and position.

EN 2133, Aerospace series — Cadmium plating of steels with specified tensile strength ≤ 1 450 MPa, copper, copper alloys and nickel alloys. (standards.iteh.ai)

EN 2424, Aerospace series — Marking of aerospace products.

EN 2491, Aerospace series Molybdenum disulphide dry lubricants 191 Coating methods.

EN 2542, Aerospace series — Steel FE-PL43S — Annealed — Bar and wire — De  $\leq$  40 mm — for prevailing torque nuts.<sup>3)</sup>

EN 2543, Aerospace series — Steel FE-PL43S — Annealed — Sheet and strip —  $0.3 \le a \le 2$  mm — for prevailing torque nuts. 3)

EN 9100, Aerospace series — Quality management systems — Requirements (based on ISO 9001:2000) and Quality systems — Model for quality assurance in design, development, production, installation and servicing (based on ISO 9001:1994).

EN 9133, Aerospace series — Quality management systems — Qualification Procedure for aerospace standard parts.

<sup>1)</sup> Corresponds to strength class of the associated bolt, the 100 per cent load of which it is able to withstand, when tested at ambient temperature, without breaking or cracking.

<sup>2)</sup> Maximum temperature that the nut is able to withstand, without permanent alteration of its original characteristics, after ambient temperature has been restored. The maximum temperature is conditioned by the cadmium plating.

<sup>3)</sup> Published as ASD Prestandard at the date of publication of this standard.

## 3 Required characteristics

## 3.1 Configuration – Dimensions – Masses

See Figure 1 and Table 1.

### 3.2 Materials

EN 2542 or EN 2543

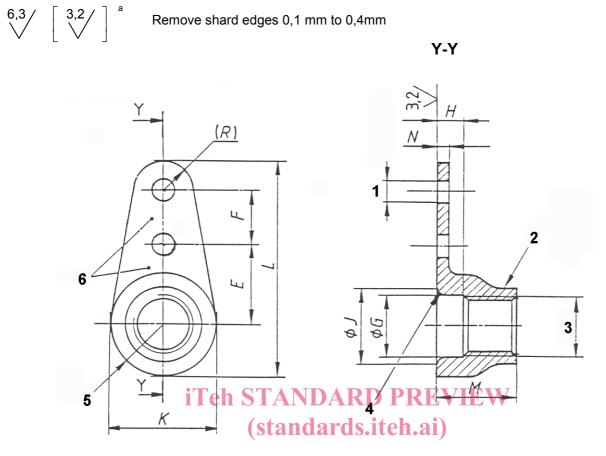
#### 3.3 Surface treatment

EN 2133,  $5 \, \mu m$  minimum on threads and all areas which can be contacted by a 20 mm diameter ball. On all other areas, a continuous cadmium plating shall be present.

EN 2491, thickness not specified

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- 2 Form out-of-round in this area to achieve the self-locking torque requirement. Tooling marks are permitted in this area.
- 3 Thread
- 4 Radius or chamfer

2 holes  $\varnothing$  S

- 5 Radius = K/2
- 6 Marking
- <sup>a</sup> These values, in micrometres, apply before cadmium plating and MoS<sub>2</sub> lubrication. The values do not apply to threads, punched holes or sheared edges, the surface texture of which will be as achieved by usual manufacturing methods.

Details of form, not stated, are at manufacturer's option.

Figure 1