



SLOVENSKI STANDARD SIST EN 2647:2009

01-april-2009

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Aerospace series - Nuts, hexagonal, self-locking, ball seat, in alloy steel, cadmium plated, MoS2 lubricated - Classification: 900 MPa (at ambient temperature)/235 °C

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Luft- und Raumfahrt - Sechskantmuttern, selbstsichernd, für Neigungsausgleich, aus legiertem Stahl, verkadmet, MoS2-geschmiert - Klasse: 900 MPa (bei Raumtemperatur)/235 °C

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Série aérospatiale - Écrous hexagonaux, à freinage interne, orientables, en acier allié, cadmiés, lubrifiés MoS2 - Classification: 900 MPa (à température ambiante)/235 °C

Ta slovenski standard je istoveten z: EN 2647:2006

ICS:

49.030 Matice Nuts

SIST EN 2647:2009 en,de

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EUROPEAN STANDARD

EN 2647

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2006

ICS 49.030.30

Supersedes EN 2647:1995

English Version

Aerospace series - Nuts, hexagonal, self-locking, ball seat, in alloy steel, cadmium plated, MoS2 lubricated - Classification: 900 MPa (at ambient temperature)/235 °C

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This European Standard was approved by CEN on 3 February 2006.

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.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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 United Kingdom.



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

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Foreword

This European Standard (EN 2647:2006) has been prepared by the AeroSpace and Defense 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 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

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, 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.

This document supersedes EN 2647:1995.

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EN 2647:2006 (E)**1 Scope**

This standard specifies the characteristics of self-locking hexagonal nuts with ball seat in alloy steel, cadmium plated, MoS₂ lubricated.

Classification: 900 MPa¹⁾ / 235 °C²⁾

They are intended to be used with washers to EN 2648 or suitable parts, see Annex A.

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

ISO 5858, *Aerospace — Self-locking nuts with maximum operating temperature ≤ 425 °C — Procurement specification*

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

EN 2000, *Aerospace series — Quality assurance — EN aerospace products — Approval of the quality system of manufacturers*

EN 2133, *Aerospace series — Cadmium plating of steels, with maximum specified tensile strength ≤ 1 450 MPa, copper, copper alloys and nickel alloys*

EN 2424, *Aerospace series — Marking of aerospace products*

EN 2491, *Aerospace series — Molybdenum disulphide dry lubricants — Coating methods*

EN 2648, *Aerospace series — Washers, concave, in alloy steel, cadmium plated*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts*

TR 3791, *Aerospace series — Materials for all metal self-locking nuts and thin wall inserts of temperature classes ≤ 425 °C³⁾*

¹⁾ Corresponds to the minimum tensile stress which the nut is able to withstand at ambient temperature without breaking or cracking when tested with a bolt of a higher strength class.

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

³⁾ Published as AECMA Technical Report at the date of publication of this standard

3 Required characteristics

3.1 Configuration — Dimensions — Masses

See Figure 1 and Table 1.

Dimensions and tolerances are expressed in millimetres and apply after cadmium plating but before MoS₂ lubrication.

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

3.2 Tolerances of form and position

See ISO 8788.

3.3 Materials

See TR 3791.

3.4 Surface treatments

EN 2133, 5 µm min. on threads and all surfaces which can be contacted by a 20 mm diameter ball. On all other surfaces, a continuous deposit shall be present.

EN 2491, thickness not specified. (standards.iteh.ai)

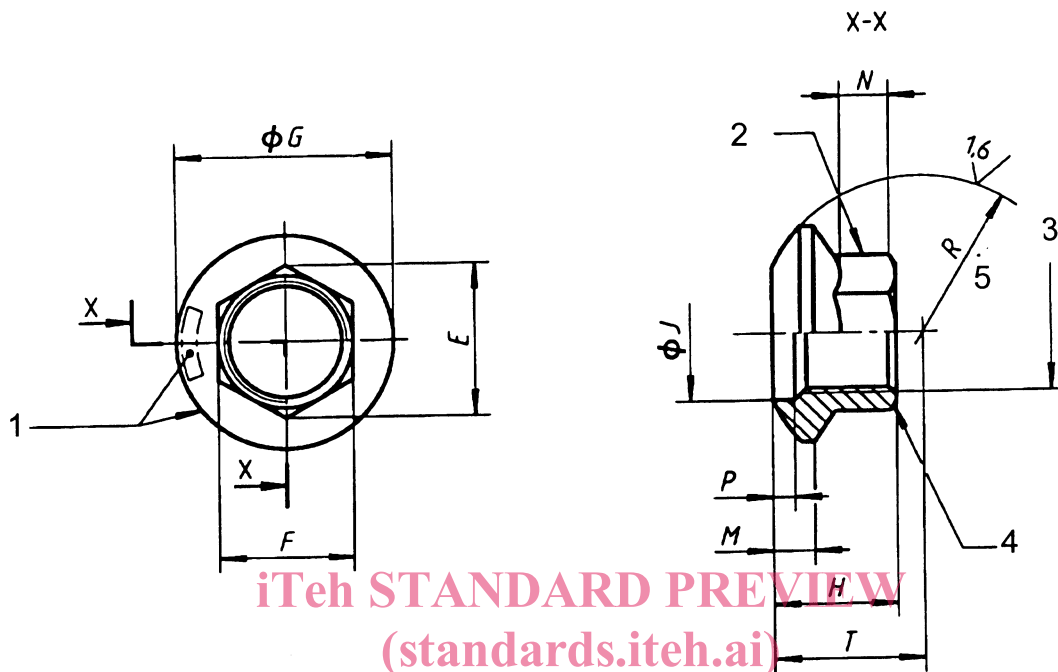
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EN 2647:2006 (E)

$$6,3 \sqrt{\quad} \left[1,6 \sqrt{\quad} \right]^a$$

Remove sharp edges 0,1 to 0,4.

**Key**

- 1 Marking (Optional location, at the manufacturer's discretion)
 2 Form out-of-round in this area to achieve the self-locking torque requirement^b
 3 Thread
 4 Chamfer, radius or broken edge
 5 Spherical

^a These values in micrometres apply before surface treatment. They do not apply to threads the surface texture of which will be as achieved by usual manufacturing methods.

^b Tooling marks are permitted in this area

Figure 1**Table 1**

Diameter code	Thread ^a	E^b min.	F^b	G $\pm 0,2$	H max.	J min.	M min.	N min.	P min.	R 0 -0,5	T	Mass ^c
050	MJ5×0,8-4H6H	6,5	6	10,3	7,05	5,5	1,7	2	2,05	8	7,5	1,7
060	MJ6×1-4H6H	7,6	7	13	8,1	6,5	2,5	2,3	2,7	9	8,4	2,5
080	MJ8×1-4H6H	10,9	10	17	9,7	8,5	3	3,2	2,5	12,5	11,75	6,5
100	MJ10×1,25-4H6H	13,2	12	21	11,95	10,5	4	3,3	2,95	16	15,1	11,3
120	MJ12×1,25-4H6H	15,5	14	24	13,46	12,5	4,5	4,5	2,65	18	16,9	17,4

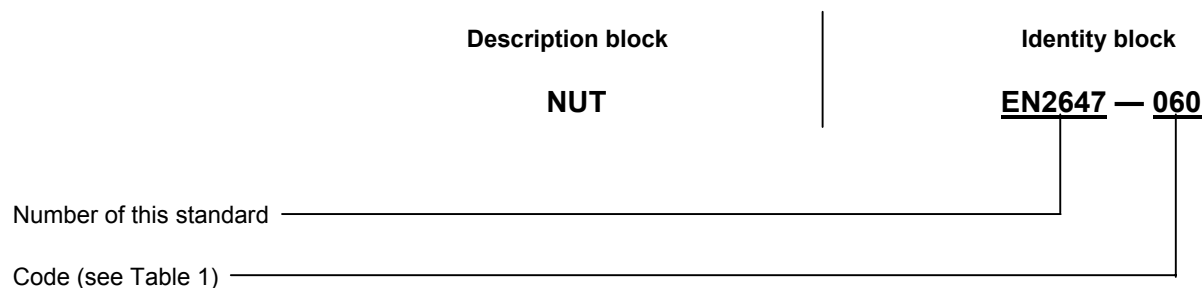
a In accordance with ISO 5855-2. In self-locking zone the tolerance apply before forming out-of-round.

b These dimensions apply before forming out-of-round, but finished nuts shall fit a standard wrench.

c Approximate values (k/1 000 pieces), given for information purposes only.

4 Designation

EXAMPLE



Note If necessary, the code I9005 shall be placed between the designation block and the identity block.

5 Marking

EN 2424, style N plus diameter code. See Figure 1.

6 Technical specification

ISO 5858, except for:

— Approval of manufacturers: see EN 2000;

— Qualification of products, nut and washer (EN 2648); see EN 9133.

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