
**Aeronavtika - Pritrdilni obroči, strižni tip, iz aluminijeve zlitine 6061, prevleke -
Palčne mere**

Aerospace series - Collar, swage locking, shear type, in aluminium alloy 6061,
conversion coating - Inch series

Luft- und Raumfahrt - Schließring für Quetschverriegelung, für Scherbeanspruchung,
aus Aluminiumlegierung 6061, Schmierfilm behandelt - Zoll-Reihe

Série aérospatiale - Bague, cisaillement-type, en alliage d'aluminium 6061, film sec -
Série en inches

Ta slovenski standard je istoveten z: prEN 6054

ICS:

49.030.99 Drugi vezni elementi Other fasteners

oSIST prEN 6054:2023**en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 6054

February 2023

ICS 49.030.99

English Version

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aluminium alloy 6061, conversion coating - Inch series**

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Quetschverriegelung, für Scherbeanspruchung, aus
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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 6054:2023) 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 document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

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1 Scope

This document specifies the characteristics of a collar, swage locking, shear type, in aluminium alloy 6061-T7, with a maximum operating temperature of 80 °C for aerospace application. This collar shall be used with pins as per EN 6050, EN 6100 or EN 6120.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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

EN 6050,¹ *Aerospace series — Pins, close tolerance, swage locking, 100° countersunk head reduced, shear type, in aluminium alloy 7050, chemical film — Inch series*

EN 6052, *Aerospace series — Rivet-collar-system, aluminium alloy, shear type, inch series — Technical specification*

EN 6100,¹ *Aerospace series — Pins, close tolerance, swage locking, 100° countersunk head, shear type, in aluminium alloy 7050, chemical film — Inch series*

EN 6120,¹ *Aerospace series — Pins, close tolerance, swage locking, protruding head, shear type, in aluminium alloy 7050, chemical film — Inch series*

AS87132,² *Lubricant, cetyl alcohol, 1-hexadecanol, application to fasteners*

MIL-DTL-5541F,³ *Chemical conversion coatings on aluminium and aluminium alloys*

QQ-A-430,⁴ *Aluminium alloy rod and wire, for rivets and cold heading*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

¹ Published as ASD-STAN Prestandard at the date of publication of this standard by AeroSpace and Defence Industries Association of Europe – Standardization (ASD-STAN) (www.asd-stan.org).

² Published by: Society of Automotive Engineers, Inc. (SAE), 400 Commonwealth Drive, Warrendale, PA 15096 USA.

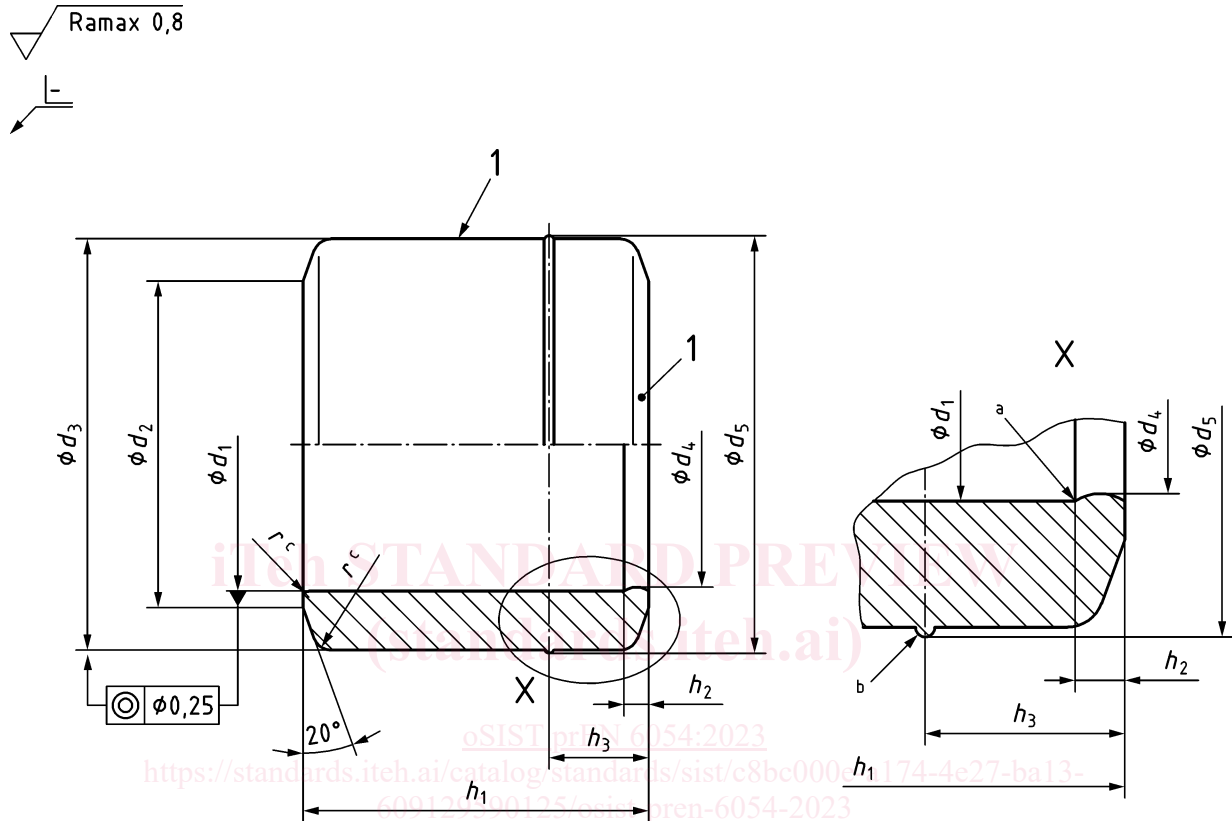
³ Published by: Department of Defense (DoD), the Pentagon, Washington, D.C., 20301, USA.

⁴ Published by: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, USA.

4 Requirements

4.1 Configuration, dimensions, tolerances and mass

The configuration, dimensions, tolerances and mass shall conform with Figure 1, Table 1 and Table 2. Dimensions and tolerances are expressed in millimetres. Values apply before lubrication.



Key

- 1 marking (see Clause 6)
- a punchout burr permitted within limits of ϕd_4 and h_2 (one end only)
- b permissible circular burr or offset ϕd_5 max. (one end only)
- c r 1,0 max. or underfill

Figure 1 — Configuration, dimensions and tolerances

4.2 Material and surface treatment

Shall be according to Table 1.

Table 1 — Material and surface treatment

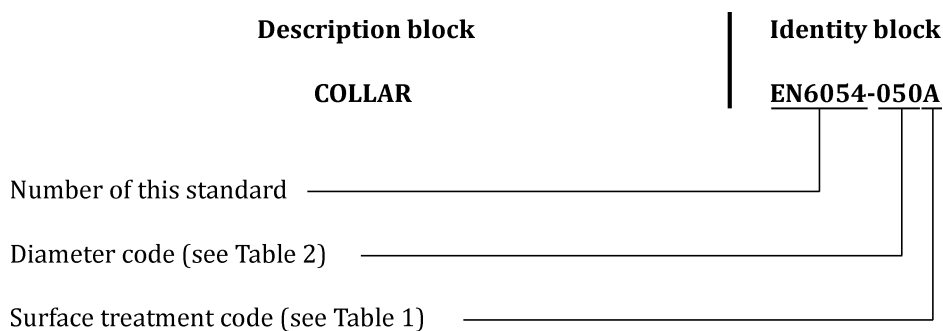
Code	Material	Heat treatment	Hardness	Surface treatment	Lubricant
A	Aluminium alloy 6061T7 in accordance with chemical composition of QQ-A-430	521 °C to 532 °C for 35 to 45 min Aging treatment: 210 °C to 221 °C for 115 to 125 min	47 to 57 Rockwell 30T (86 to 111 Vickers 15 KgF)	Chemical film per MIL-DTL-5541F class 1A (gold chromate) plus green dye	Cetyl alcohol lubrication per AS87132, grade B

Table 2 — Dimensions, tolerances and mass

Diameter code	d_1	d_2	d_3		d_4	d_5	h_1	h_2	h_3	Mass
	ø 0,05	max.	min.	max.	min.	max.	ø 0,25	max.	Ref.	kg/1 000 pieces ≈
050	4,83	5,38	6,76	6,80	4,70	6,88	5,72	0,41	1,65	0,26
060	5,51	6,02	7,88	7,97	5,38	8,07	7,19	0,41	1,78	0,46
080	6,32	7,11	8,84	8,94	6,22	9,19	7,19	0,41	1,78	0,56

5 Designation

EXAMPLE



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

Example of part numbering in accordance with ATA iSpec 2200 (15 character rule).

6 Marking

Shall be according to EN 2424, style F, depressed 0,25 mm max.

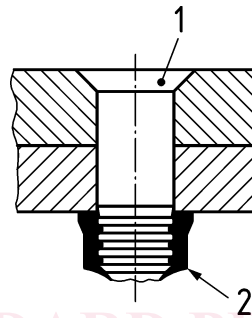
Marking position at manufacturer's discretion.

7 Technical specification

Shall be according to EN 6052.

8 Example of installation

Shall be according to Figure 2.



Key

- 1 pin EN 6050, EN 6100 or EN 6120
- 2 collar EN 6054 (installed condition)

Figure 2 — Example of installation

9 Quality Management System

Product Standard: The manufacturer's operations shall be an approved production organization for aerospace products and shall demonstrate that it has implemented and is able to maintain a quality management system (e.g. according to EN 9100 or an equivalent aerospace accepted and established quality management system).

Specification: The qualification procedure for aerospace standard products (e.g. according to EN 9133 or an equivalent aerospace accepted and established qualification procedure) shall be used and documented according to the specified tests if not otherwise agreed between customer and supplier.

Bibliography

- [1] EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*
- [2] EN 9133, *Aerospace series — Quality Management Systems — Qualification Procedure for Aerospace Standard Products*
- [3] ATA iSpec 2200, ATA Standard Numbering System

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