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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46557-2025

**Bihexagonal self-locking nuts with counterbore and MJ threads
for aerospace**

航空航天用带沉头窝的MJ螺纹十二角自锁螺母

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is modified to adopt ISO 13589:1998 "Aerospace nuts, double hexagonal, self-locking, with countersunk and MJ threads, classified as.

1100MPa (ambient temperature)/425°C, 1100MPa (ambient temperature)/650°C, 1210MPa (ambient temperature)/425°C, 1210 MPa (ambient temperature)/730°C, 1550MPa (ambient temperature)/235°C, 1550MPa (ambient temperature)/425°C and 1550MPa (Ambient temperature)/600°C Dimensions.

This document has undergone the following structural adjustments compared to ISO 13589:1998.

---A new chapter, "Terminology and Definitions," has been added.

The technical differences between this document and ISO 13589:1998, and the reasons therefor, are as follows.

- a) The scope has been changed (see Chapter 1, Chapter 1 of ISO 13589:1998) to adapt to my country's technical conditions and the latest technical requirements;
- b) The representation of the structural diagram has been changed (see Figure 1, Figure 1 of ISO 13589:1998) to conform to domestic drafting practices;
- c) The requirement for a surface roughness (Ra) of 1.6 has been removed (see Figure 1 of ISO 13589:1998) to adapt to my country's technical conditions and the latest developments.

Technical requirements;

- d) Change the "Note" in Figure 1 to a paragraph format (see the paragraph in Figure 1, the note in Figure 1 in ISO 13589:1998) to suit the requirements.

my country's technical requirements;

e) The "diameter code" (see Table 1 of ISO 13589:1998) has been removed to conform to domestic labeling practices;

f) The values of 7 structural dimensions have been changed (see Table 1, Table 1 of ISO 13589:1998) to adapt to the latest technical requirements in my country.

The following editorial changes have been made to this document.

---To harmonize with existing standards, the standard name has been changed to "Aerospace-grade MJ threaded dodecagonal self-locking nut with countersunk head";

---The standards ISO 5858:1991 and ISO 8641:1987, which are not referenced in this document, have been removed;

---The descriptions of surface roughness and sharp edge blunting requirements in the figure have been changed and are now expressed in figure captions (see Figure 1);

---The representation of letters in the structural dimensions has been changed (see Figure 1 and Table 1);

---The explanatory statement in footnote b) of the table has been deleted;

---The order of letters in the table has been changed (see Table 1).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Aircraft Standardization Technical Committee (SAC/TC435).

1 Scope

This document specifies the structure and dimensions of MJ threaded twelve-corner self-locking nuts with countersunk dimples for aerospace applications, with a strength grade of [missing information].

1100MPa1)/425 °C2), 1100 MPa1)/650 °C2), 1210 MPa1)/425 °C2), 1210 MPa1)/730 °C2), 1550MPa1)/235°C2), 1550MPa1)/425°C2) and 1550MPa1)/600°C2).

1) When tested with bolts of the highest strength grade, the nut can withstand the minimum tensile load at ambient temperature without failure.

2) After the nut has been subjected to the maximum operating temperature, its original properties will not be permanently changed upon returning to room temperature. The maximum operating temperature depends on the material or surface treatment of the nut.

The rational state.

This document applies to the design of MJ threaded dodecagonal self-locking nuts with countersunk head for aerospace applications (hereinafter referred to as nuts).

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 43924.2 Aerospace MJ Threads Part 2: Limiting Dimensions of Bolt and Nut Threads (GB/T 43924.2-2024, ISO 5855-2:1999, MOD) ISO 4095 Aerospace-Bihexagonal Drives Metric Series ISO 8788 Aerospace Nuts, Metric Tolerances

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Structure and Dimensions

The structure of the nut is shown in Figure 1, and the dimensions of the nut are shown in Table 1. This document specifies the dimensions of the nut after surface coating and before lubrication.

Inch and tolerance.