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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Aerospace — Self-locking nuts with maximum operating temperature greater than 425 °C — Procurement specification

*Aéronautique et espace — Écrous à freinage interne dont la température maximale
d'utilisation est supérieure à 425 °C — Spécification d'approvisionnement*

Reference number
ISO 8641 : 1987 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8641 was prepared by Technical Committee ISO/TC 20, *Aerospace and space vehicles*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Aerospace — Self-locking nuts with maximum operating temperature greater than 425 °C — Procurement specification

1 Scope and field of application

This International Standard specifies the requirements for metric self-locking nuts, with MJ thread, intended for use in aerospace construction at a maximum temperature greater than 425 °C.

This International Standard applies to self-locking nuts as defined above, provided that reference is made to this International Standard in the relevant definition document.

2 References

ISO 691, *Wrench and socket openings — Metric series — Tolerances for general use.*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection.*¹⁾

ISO 3534, *Statistics — Vocabulary and symbols.*

ISO 5855-1, *Aerospace construction — MJ threads — Part 1: Basic profile.*

ISO 5855-2, *Aerospace construction — MJ threads — Part 2: Dimensions for bolts and nuts.*

ISO 7403, *Fasteners for aerospace construction — Spline drive wrenching configuration — Metric series.*

ISO 8642, *Aerospace — Self-locking nuts with maximum operating temperature greater than 425 °C — Test methods.*

ISO 8788, *Aerospace — Fasteners — Tolerances of form and position for nuts.*

3 Definitions

3.1 definition document: Document specifying all the requirements for nuts, i.e.

- metallurgical;

- geometrical and dimensional;

- functional (strength and temperature classes).

The definition document may be an International Standard, a national standard or an in-house standard or drawing.

3.2 finished nut: A nut ready for use, inclusive of any possible treatments and/or surface coatings, as specified in the definition document.

3.3 batch: A definite quantity of some commodity manufactured or produced under conditions which are presumed to be uniform.²⁾

For the purposes of this International Standard, a batch is a quantity of finished nuts, of the same type and same diameter, produced from a material obtained from the same melt, manufactured in the course of the same production cycle, following the same manufacturing route and having undergone all the relevant heat treatments and surface treatments.

3.4 crack: Rupture in the material which may extend in any direction and which may be intercrystalline or transcrystalline in character.

3.5 seam: Open surface defect resulting from some stripping of the metal.

3.6 lap: The folding over of unwelded metal that can arise when the material is formed (drawing) or in the finished product (pressing or forging).

3.7 inclusions: Non-metallic particles inherent from the material manufacturing process. These particles may exist either as discrete particles or as strings of particles extending longitudinally.

3.8 critical defect: A defect that, according to judgment and experience, is likely to result in hazardous or unsafe conditions for individuals using, maintaining or depending upon the considered product, or that is likely to prevent performance of the function of a major end item.²⁾

1) At present at the stage of draft. (Revision, in part, of ISO 2859 : 1974.)

2) Definition taken from ISO 3534. (ISO 3534 is currently being revised by ISO/TC 69, *Applications of statistical methods.*)