

**Studs, MJ threads,
in titanium alloy
TI-P64001, MoS₂ coated,
with serrated locking
ring in corrosion
resisting steel —
Strength class:
1 100 MPa (at ambient
temperature) —
Technical specification**

The European Standard EN 4458:2005 has the status of a
British Standard

ICS 49.030.20

National foreword

This British Standard is the official English language version of EN 4458:2005.

The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 18, an inside back cover and a back cover.

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English Version

Aerospace series - Studs, MJ threads, in titanium alloy TI-P64001, MoS2 coated, with serrated locking ring in corrosion resisting steel - Strength class: 1 100 MPa (at ambient temperature) - Technical specification

Série aérospatiale - Goujons, filetage MJ, en alliage de titane TI-P64001, revêtus MoS2, avec bague de verrouillage dentelée en acier résistant à la corrosion - Classe de résistance : 1 100 MPa (à température ambiante) - Spécification technique

Luft- und Raumfahrt - Stiftschrauben, MJ-Gewinde aus Titanlegierung TI-P64001, MoS2 beschichtet, mit Ringsicherung aus korrosionsbeständigem Stahl - Festigkeitsklasse: 1 100 MPa (bei Raumtemperatur) - Technische Lieferbedingungen

This European Standard was approved by CEN on 26 September 2005.

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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 Central Secretariat has the same status as the official versions.

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Foreword

This European Standard (EN 4458:2005) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 AECMA, 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 May 2006, and conflicting national standards shall be withdrawn at the latest by May 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.

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1 Scope

This standard specifies the characteristics, qualification and acceptance requirements for studs with MJ threads in TI-P64001, MoS₂ coated, with serrated locking ring in corrosion resisting steel.

Strength class: 1 100 MPa ¹⁾

It is applicable whenever referenced.

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 2859-1, *Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection.*

ISO 3452, *Non-destructive testing – Penetrant inspection – General principles.*

ISO 7961, *Aerospace – Bolts – Test methods.*

EN ISO 4288, *Geometrical Product Specifications (GPS) – Surface texture: Profile method – Rules and procedures for the assessment of surface texture (ISO 4288:1996)*

EN 2638, *Aerospace series – Aluminium alloy 2024-T3 extruded bar and section – $1,2 \leq (a \text{ or } D) \leq 150 \text{ mm}$ with coarse peripheral grain control.* ²⁾

EN 4460, *Aerospace series – Studs, in titanium alloy TI-P64001, with serrated locking ring in corrosion resisting steel – Installation and removal procedure.* ²⁾

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

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply.

3.1

batch

quantity of finished parts, 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

1) Minimum tensile strength of the material at ambient temperature.

2) Published as AECMA Prestandard at the date of publication of this standard.

3.2 Surface discontinuities

3.2.1

crack

rupture in the material which may extend in any direction and which may be intercrystalline or transcrystalline in character

3.2.2

seam

open surface defect

3.2.3

lap

surface defect caused by folding over metal fins or sharp corners and then compressing them into the surface

3.3

test temperature

ambient temperature, unless otherwise specified

3.4

simple random sampling

the taking of n items from a population of N items in such a way that all possible combinations of n items have the same probability of being chosen

3.5

critical defect

a defect that, according to judgement 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

3.6

major defect

a defect other than critical, that is likely to result in a failure or to reduce materially the usability of the considered product for its intended purpose

3.7

minor defect

a defect that is not likely to reduce materially the usability of the considered product for its intended purpose, or that is a departure from established specification having little bearing on the effective use or operation of this product

3.8

sampling plan

a plan according to which one or more samples are taken in order to obtain information and possibly to reach a decision

3.9

limiting quality

in a sampling plan, the quality limit which corresponds to the specified 10 % probability of acceptance

3.10

acceptable quality limit (AQL)

a quality limit which in a sampling plan corresponds to a specified but relatively high probability of acceptance

It is the maximum per cent defective (or the maximum number of defects per hundred units) that, for purposes of sampling inspection can be considered satisfactory as a process average.