BS EN 4500-004:2024

BSI Standards Publication

Aerospace series — Metallic materials — Rules for drafting and presentation of material standards

Part 004: Specific rules for titanium and titanium alloys

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National foreword

This British Standard is the UK implementation of EN 4500-004:2024. It supersedes BS EN 4500-004:2012, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/61, Metallic materials for aerospace purposes.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Luft- und Raumfahrt - Metallische Werkstoffe - Regeln für das Erstellen und die Gestaltung von Werkstoffnormen Teil 004: Besondere Regeln für Titan und Titanlegierungen

This European Standard was approved by CEN on 17 June 2024.

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European foreword

This document (EN 4500-004:2024) has been prepared by 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 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2025, and conflicting national standards shall be withdrawn at the latest by February 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 4500-004:2012.

The main changes with respect to the previous edition are as follows:

EN 4500-004 (P2), 10/2012 — XXXX.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this document: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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Introduction

This document is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

The EN 4500 series (*Aerospace series — Metallic materials — Rules for drafting and presentation of material standards*) is composed by the following documents:

— General rules	EN 4500-001;
— Specific rules for aluminium, aluminium alloys and magnesium alloys	EN 4500-002;
— Specific rules for heat-resisting alloys	EN 4500-003;
— Specific rules for titanium and titanium alloys	EN 4500-004;
— Specific rules for steels	EN 4500-005;
— Specific rules for filler metals for welding	EN 4500-002 to EN 4500-005;
— Specific rules for filler metals for brazing	EN 4500-006.

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1 Scope

The EN 4500 series specifies the rules for the drafting and presentation of metallic material standards for aerospace applications.

This Part 004 specifies the "Specific rules for titanium and titanium alloys".

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 4259, *Aerospace series — Metallic materials — Definition of general terms*

EN 4500-001, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 001: General rules*

EN 4800-001,[1] *Aerospace series — Titanium and titanium alloys — Technical specification — Part 001: Plates, sheets and strips*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4259 and EN 4500-001 apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

4 Rules for drafting a European standard for aerospace metallic materials

4.1 General

Examples given in Annexes are only intended to illustrate the rules for drafting and presentation and might not correspond to real standardized EN semi-finished products. Technological development can require the use of terms additional to those listed.

4.2 Title

4.2.1 General

Should be according to EN 4500-001 and Annex A of this document.

The following are examples of descriptions which shall be used.

[1] Published as ASD-STAN prEN at the date of publication of this document available at: https://www.asd-stan.org/.

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4.2.2 Method of melting

For forging stock and forgings, only the required grade shall be indicated in accordance with EN 4800-001.

For other forms, use one or more of the following terms:

— non consumable electrode vacuum melted;

— consumable electrode vacuum arc melted;

— consumable electrode vacuum arc remelted;

— multiple melted;

— plasma cold hearth melted (P.C.H.M.);

— electron-beam melted.

4.2.3 Form entries

a) Sheets, strips, plates.

The terms may be qualified with one of the following terms:

1) cold rolled;

2) hot rolled.

b) Bars.

The term may be qualified with one or more of the following terms:

1) rolled;

2) extruded;

3) forged.

c) Sections.

The term may be qualified with the following term:

1) extruded.

d) Tubes.

The term may be qualified with one or more of the following terms:

1) rolled;

2) drawn;

3) extruded;

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