



SLOVENSKI STANDARD

SIST EN 4500-006:2024

01-oktober-2024

Aeronavtika - Kovinski materiali - Pravila za načrtovanje in predstavljanje standardov za materiale - 6. del: Posebna pravila za kovinska polnila za spajkanje

Aerospace series - Metallic materials - Rules for drafting and presentation of material standards - Part 6: Specific rules for filler metals for brazing

Luft- und Raumfahrt - Metallische Werkstoffe - Regeln für das Erstellen und die Gestaltung von Werkstoffnormen - Teil 6: Besondere Regeln für Hartlote

Série aérospatiale - Matériaux métalliques - Règles pour la rédaction et la présentation des normes de matériaux - Partie 006: Règles spécifiques aux métaux d'apport de brasage

Ta slovenski standard je istoveten z: EN 4500-006:2024

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ICS:

25.160.20	Potrošni material pri varjenju	Welding consumables
49.025.05	Železove zlitine na splošno	Ferrous alloys in general

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en,fr,de

EUROPEAN STANDARD

EN 4500-006

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2024

ICS 01.120; 49.025.05; 49.025.15

English Version

Aerospace series - Metallic materials - Rules for drafting and presentation of material standards - Part 006: Specific rules for filler metals for brazing

Série aérospatiale - Matériaux métalliques - Règles
pour la rédaction et la présentation des normes de
matériaux - Partie 006 : Règles spécifiques aux métaux
d'apport de brasage

Luft- und Raumfahrt - Metallische Werkstoffe - Regeln
für das Erstellen und die Gestaltung von
Werkstoffnormen - Teil 6: Besondere Regeln für
Hartlote

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

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.

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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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EN 4500-006:2024(E)

European foreword

This document (EN 4500-006:2024) 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 XPprEN 4500-6:1997, which was published by ASD-STAN.

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

— XPprEN 4500-6 (P1), 02/1997 — 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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EN 4500-006:2024(E)

1 Scope

The EN 4500 series specifies the rules for the drafting and presentation of metallic material standards for aerospace applications. This Part 006 specifies the “Specific rules for filler metals for brazing”.

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*

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, Clause A.1 of this document.

When the material has an ECISS designation, this shall be shown, for information, in brackets after the designation. See Annex A, Clause A.2.

The following are examples of descriptions which shall be used.

4.2.2 Method of melting

Complete in accordance with EN 4500-001 using one or more of the following terms:

- air melted;
- inert gas melted;

- vacuum melted;
- non-consumable electrode vacuum melted;
- consumable electrode vacuum arc melted;
- consumable electrode vacuum arc remelted.

4.2.3 Form entries

a) Amorphous foil.

The term may be qualified with the following term:

- 1) melt spun.

b) Borided foil.

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

- 1) cold rolled;
- 2) hot rolled;
- 3) boron diffused into the surface.

c) Rolled foil.

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

- 1) cold rolled;
- 2) hot rolled.

d) Powder.

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

- 1) water atomised;
- 2) gas atomised;
- 3) sieved.

e) Paste.

f) Tape.

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g) Wire.

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

- 1) cold drawn;
- 2) cold rolled;
- 3) cold extruded.

4.3 Introduction

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

4.4 Scope, normative references, terms and definitions, requirements

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

4.5 Table 1 (1 of 3)**4.5.1 Line 1: Material designation**

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

4.5.2 Line 2: Chemical composition

The chemical composition shall be written in accordance with EN 4500-001 and the order of presentation of elements shall conform to the following rules:

- C, Si, Mn, P, S;
- alloying elements in alphabetical order using their chemical symbol;
- trace elements in alphabetical order;
- ratio and/or total elements.

4.5.3 Line 3: Method of melting

Should be according to EN 4500-001 and Annex D of this document, using the terms listed in 4.2.2.

4.5.4 Line 4.1: Form

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

4.5.5 Line 4.2: Method of production

Should be according to EN 4500-001 and Annex D of this document, using the applicable terms given in 4.2.

4.5.6 Line 4.3: Limit dimension(s)

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